THE BEST SELLING MAGAZINE FOR THE

AMSTRAD PCW

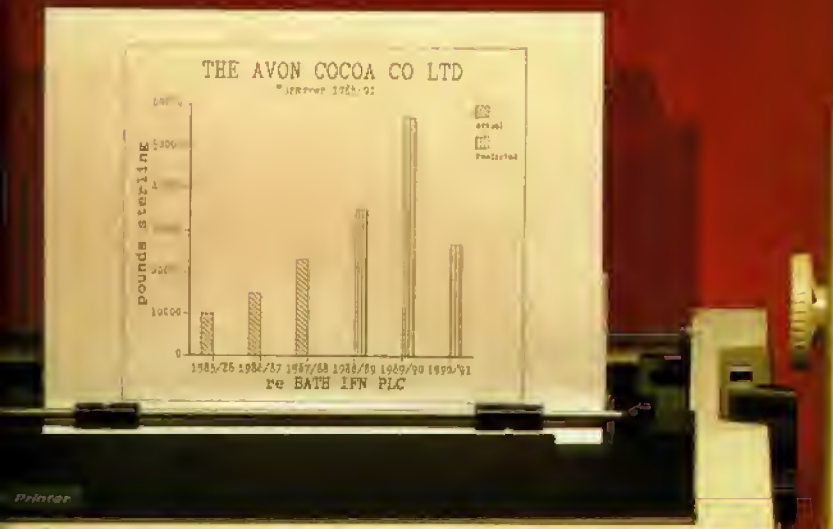
8000 PLUS

8256 • 8512 • 9512

ISSUE 16 • JANUARY 1988 • £1.50

WIN!

Two superb Panasonic printers up for grabs



Dot matrix flexibility

Daisywheel quality

Get the best of both worlds from your PCW – five budget printers on test

PLUS: The complete PCW buyer's guide to spreadsheets, graphics and games

MASTERFILE 8000

FOR ALL AMSTRAD PCW COMPUTERS

MASTERFILE 8000, the subject of so many enquiries, is now available.

MASTERFILE 8000 is a totally new database product. While drawing on the best features of the CPC versions, it has been designed specifically for the PCW range. The resulting combination of control and power is a delight to use.

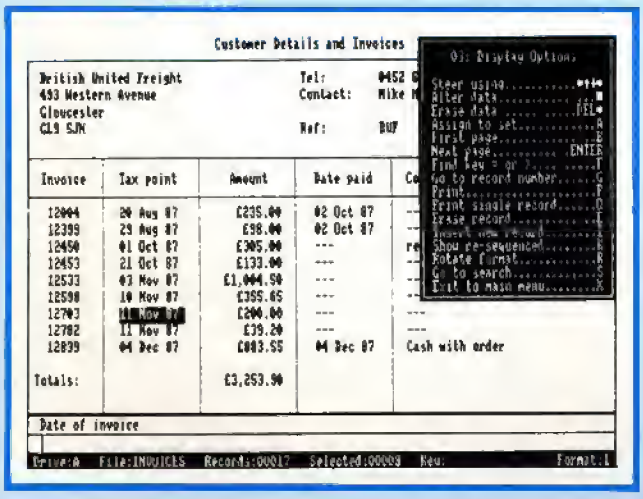
Other products offer a choice between fast but limited-capacity RAM files, and large-capacity but cumbersome fixed-length, direct-access disc files. **MASTERFILE 8000** and the PCW RAM disc combine to offer high capacity with fast access to variable-length data. File capacity is limited only by the size of your RAM disc.

A MASTERFILE hallmark is the provision of multiple, user-designed display formats. This flexibility remains, but now it's even easier. With **MASTERFILE 8000** you design your formats "live"; no more questionnaires, just move your format effects around the screen using the cursor keys!

Record updating is even easier than before — just steer your cursor to any field on the screen and then insert/erase/alter as required.

Special options are provided for handling dates and surnames, and column totals can be generated.

All screen work is done graphically — and hence we offer unique panel, box, and ruled line options. Choose the line spacing at pixel resolution — you will be amazed how much clearer 9-pixel lines are than the usual 8-pixels. (Study the picture.) And all this faster than CP/M normally lets you paint the screen! PCW printer functions, under menu control, are provided.

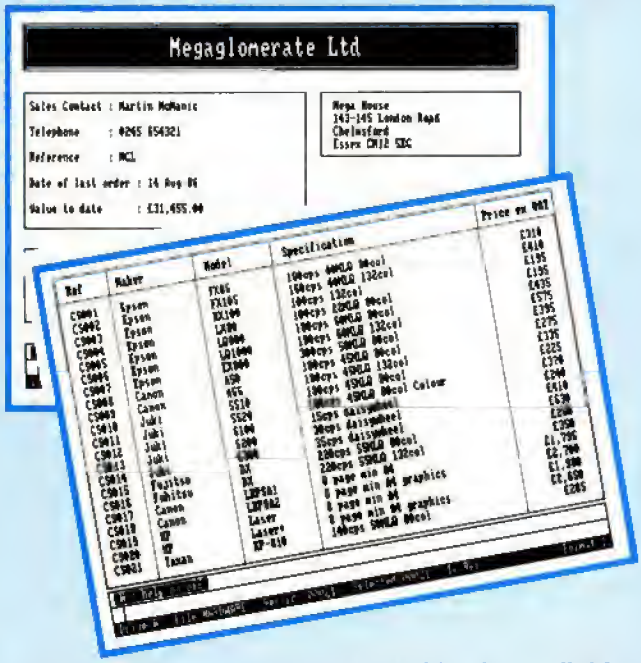


Keyed files are maintained automatically in key sequence, with never any need to sort. You can have unkeyed files too, where records can be inserted at any point in the file.

Any file can make RELATIONAL references to up to EIGHT read-only keyed files, the linkage being effected purely by the use of matching file and data names.

You can import/merge ASCII files (e.g. from MASTERFILE III), or export any data (e.g. to a word-processor), and merge files. For keyed files this is a true merge, not just an append operation. By virtue of export and re-import you can make a copy of a file in another key sequence. New data fields can be added at any time.

File searches combine flexibility with speed. (**MASTERFILE 8000** usually waits for you, not the other way around.) You can even assign subsets of a file into one or more of seven pigeon-holes for subsequent reference or further manipulation.



FIELD-TO-FIELD CALCULATION is available, using any mixture of terms and arithmetic operators + — * / ( ).

MASTERFILE 8000 is totally menu-driven, fully machine-coded, and comes with example files and a detailed manual. We claim (modestly) that you will not find another filing system with such power, flexibility, and friendliness.

MASTERFILE 8000 costs **£49.95** including VAT and P&P to anywhere in Europe. Elsewhere please add 20% for air-mail service. ACCESS/VISA/MASTERCARD orders are welcome, written or telephoned, quoting card expiry date. Make cheques payable to "Campbell Systems".

Our normal response is return of post, 1st class.

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8000 PLUS

OPENING MENU

OPENING MENU

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kNockout Reviews
InValuable Tips
SiZzling Offers

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PUBLISHED BY
FUTURE PUBLISHING LTD

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BATH • BA1 1EJ
TEL • 0225 446034
FAX • 0225 446019

Telecom Gold • 84:TXT152

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SOMERTON
SOMERSET • TA11 7PY
TEL • 0458 74011

ADVERTISING SALES

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YOUR CONTACTS

EDITOR
Ben Taylor

ASSISTANT EDITOR
Alec Rae

TECHNICAL EDITOR
Rob Ainsley

ADVERTISING MANAGER
Margaret Clarke

AD PRODUCTION
Jenny Evans
Diane Taverner

ART EDITOR
Kim Bale

SUBSCRIPTIONS
Carrie-Anne Porter

PUBLISHER
Chris Anderson

COVER PHOTOGRAPHY
STUART BAYNES PHOTOGRAPHY
BATH
TEL • 0225 66343

COLOUR ORIGINATION
WESSEX REPRODUCTIONS
352A WELLS ROAD
BRISTOL • BS4 0QL

PRINTING
REDWOOD WEB OFFSET
YEOMANS WAY
TROWBRIDGE • WILTS

DISTRIBUTION
SEYMOUR PRESS
334 BRIXTON ROAD
LONDON • SW9 7AG

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cp software

HOTSHOT 1.2

HOTSHOT sits in the background of your Locoscript word processor ready to be called up at the press of a key. It doesn't matter what you are doing in Locoscript, HOTSHOT is always waiting for you.

Every extra needed to make your working life efficient.
You're writing a letter and need a VAT price, use HOTSHOT's **calculator**. You're using a speadsheet and need to make some notes, use HOTSHOT's **notepad**. You need the address of the person you're writing to, use HOTSHOT's **address book** and unique 'COPY' function, the address drops into the letter you're writing. You need to remind yourself of something later on, use HOTSHOT's **timer/alarm clock**. You need to size your document, use HOTSHOT's **word counter**.

Although such packages have been released before, HOTSHOT's trump card is that it can be accessed from within Locoscript.
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- sophisticated calculator
- electronic diary to keep track of important events
- address book with alphabetic sort
- note pad with unique index markers
- locoscript word counter, ideal for authors
- encode/decode Locoscipt files, password prevents unauthorised access

Compatible with Locoscript 1.2 for the PCW 8256/8512 £24.95

Not so much a LIGHTNING BASIC EXTENSION ... more a way of life

70+ keywords and 100% PCW compatibility, the ultimate PCW Basic extension.
- all functions use simple Basic keywords, no need for Calls or Pokes
- contains all the relevant functions of 'All you ever...' plus many new features in an ideal environment for the Basic programmer
- includes **Sprite** and **Icon** commands for **brilliant graphic output**
- **medium and high resolution graphics** - points, lines, circles, fills
- extra editing facilities, **variable list**, search etc.
- full A4 screen dumps to dot matrix printer
- UDG's and new character sets
- instant **screen recall**

New Basic keywords include:
Icon Create/Place/Move, Sprite Create/Place/Move, Time Set/Read, User, Vlist, Window, Wait, Draw/Undraw, Plot/Unplot, Line/Unline, Flash, Deek, Doke, Disc Save/Load, Screen Dump/Save/Load, Cursor Anywhere, Graphics High/Medium/Print, Keys, Beep, Yodel, Getkey, Question, Word address, Juggle char set, Printer Condense/Echo/Text/Reset, Reverse video, Memory Load/Save and many more.

'Lightning Basic' is compatible with PCW 8256/8512/9512 £24.95

BRIDGE PLAYER 2000 WITH TUTOR

- This is the Bridge Player for both the expert and beginner, with versatile
- bidding that sets a really high standard, matched by **powerful card play.**
- Generates **random hands** and allows proper bidding in the **ACOL** system, using **Stayman, Blackwood** and a choice of **No-Trump** convention.
- Integral **Tutorial section** with 20 set hands, advice and explanation.
- **Massive range of options** and comprehensive information displays.

*"The program is **very well thought through** and serves a dual function. First of all, if you want to learn how to play then you can do so easily in Tutor mode, and secondly, if you can play but can't find three others to play with then here's your chance to **keep your hand in using Player mode.***
The Tutor teaches you the game as you play by ensuring that you don't make wrong moves. At the end of the game you get a full page of text analysing the whole game, explaining the bidding process and sequence of play, together with an analysis of underlying tricks and possible alternative ways to outflank your opponents.
*In the Player mode there's a **wide range** of restart and go back one move **options** which ensure you **can learn something new each time.***
*The **display is fine**, the table sits in the middle and you play your round with **lots of info** about the last trick and the score displayed around the edge of the screen.*
*This is a **very thoughtful way to get the most out of Bridge** on the computer ... **Bridge Player 2000 is a good one**"* **PC Plus**
*"**Large and simply explained Tutorial**, easy for beginners, could easily keep a Bridge Player occupied for the rest of eternity"* **8000 Plus**

Bridge Player 2000 is compatible with PCW 8256/8512/9512 £15.95

all you ever wanted to know about GRAPHICS, THE UNIVERSE AND EVERYTHING FOR PCW ... but were afraid to ask

50+ routines and 100% PCW compatibility, the ultimate PCW toolkit.
- create devastating graphics using **fast, smooth sprites**
- make **direct use of RAM disc**
- create **User Defined Graphics**
- modify character set, send UDG's and enlarged characters to dot matrix printer
- experiment with **sound** routines
- directly **access Video Ram**
- discover hitherto unpublished hardware information, Port specifications and **Edge Connector diagram**
- easy to use from BASIC, PASCAL, C, Assembler etc.
- access to CP/M functions, **full source code supplied**

Routines include:
Linedraw/Erase, Pixel Plot/Erase, Flood Fill, Create Sprite, Plot Sprite, Move Sprite, Change Char Set, UDG's, Turn Screen On/Off, Invert Screen, Sound, Send UDG's and Double Height/Double Width Chars to dot matrix printer, Wait for Frame Flyback, Delay, Randomiser, Move Cursor anywhere, Read Joystick, Disc Moter On/Off, Full Software Reset, Save/Load Memory from Disc or RAMdisc, Find System Clock, Save'Load Screen and much more !
Comprehensive manual plus detailed documented source code.

'All you ever ...' is compatible with PCW 8256/8512/9512 £19.95

3-D CLOCK CHESS

The **strongest** playing program, the most **advanced** 3D graphics, the **power** to play incredibly **fast** with an unsurpassed **range of options.**

Strong - the ultimate PCW chess program using advanced artificial intelligence techniques.
Fast - 3D CLOCK CHESS is incredibly fast, and you can determine the level of play by setting its response time in any of four different modes to give hundreds of possible levels.
Penetrating - 3D CLOCK CHESS has amazing power, at tournament levels it looks ahead at least seven moves deep, trying tens of thousand of lines of play.
Friendly - It comes with every possible feature, keeping you fully informed about its own thought processes. An ideal tutor for beginner and expert alike.
3D Graphics - 3D CLOCK CHESS uses realistic 3D graphics, not crude line drawings like other PCW chess programs.
Opening book - 3D CLOCK CHESS plans appropriately for each stage of the game. In the opening it is able to draw on its extensive opening library of moves.

This is what Jon Speelman, Grandmaster and British Chess Champion says: *"With its strong playing program and excellent 3D graphics, I can confidently recommend 3D CLOCK CHESS"*
3D CLOCK CHESS is compatible with PCW 8256/8512/9512 £15.95

please rush me the following titles for my PCW 8256/8512/9512

PRODUCT	PRICE	QUANTITY
Hotshot 1.2	£24.95	
All you ever wanted..	£19.95	
Lightning Basic Extension	£24.95	
3D Clock Chess	£15.95	
Bridge Player 2000	£15.95	
Postage to Europe (per item)	£ 1.20	
Postage ex Europe (per item)	£ 2.00	

UK post and packing included

Please debit my Access/Visa card: Card no. | expiry date:

I enclose a cheque/postal order to the value of: £

Name:

Address:

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CP SOFTWARE, Stonefield, 198 The Hill, Burford, Oxfordshire, OX8 4HX
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Sits Vac

Future Publishing is looking for a Production Editor. Based in Bath, the job will initially entail liaising between the editorial and art teams on *8000 Plus* and *Diesel Car* magazines, with specific responsibility for computer typesetting, proofreading, and possibly some sub-editing. Excellent prospects etc, as all adverts say.

Our production process is completely electronic, using an Apple Macintosh desktop publishing system. Specific Macintosh experience isn't necessary, but an aptitude for the vagaries of computers is. Also vital is a sense of humour in adversity, and the ability to nag recalcitrant editors in a kindly but firm way.

To apply, please send a CV to Chris Anderson at our Bath address.

Just fancy that!

Probably not many readers are aware of the politicking in the world of Amstrad magazines, but here's a funny story. At least, we laughed.

There is a company called Database who publish two PCW magazines. This same company also has a software arm which publishes, among other products, Mini Office Professional, which we are reviewing this month.

We tried to get hold of a copy of Mini Office Professional to review, but were repeatedly told that it was not yet available. It turns out in the event that the package was on sale in Bath for two weeks while 'not yet available', so in the end we swallowed our pride and actually *bought* a copy to review.

Surely no-one could be so cynical as to think that Database might be holding their products back from rival magazines so as to ensure exclusive reviews for their own magazines? Goodness no. And just to show there are no hard feelings, we even gave it a good write-up.

Picture-book story

Thinking up something funny to say about CP/M and LocoScript is pretty hard work, but to our amazement our loyal cartoonist Chris Garrett seems to manage the impossible every month. Although a normally shy Brummie, Chris has let slip this month that he is getting married – congratulations from us all.

"NOW, THANKS – JUST WHAT I ALWAYS WANTED..."

DEARTH INVADERS

"It's Christmastime again" – or if you've picked this issue up in January, "So that was Christmas, was it?" Christmas means snow, Billy Smart's Circus, wrecking the results of 11½ months' dieting, another Bond film on TV, and games.

Games. Now there's a funny thing. Future Publishing – the company behind 8000 Plus – publishes several other magazines which rely on games software for their appeal. On those magazines, Christmas is the premier issue of the year. Advertising sales boom, and all the software houses rush to get ***the*** *megagame out to catch the kids' stockings.*

The state of the games market on PCWs is very puzzling. In the three months leading up to Christmas there have really been only two or three new games released on the PCW. 8000 Plus readers may not be teenagers, but are by no means averse to a bit of fun. Some games have sold very well on the PCW – 'The Hitchhiker's Guide to the Galaxy' and 'Scrabble' are probably two of 8000 Plus's best-selling Special Offer items of the last year.

So why is it that the market for PCW games is dead in its disc box? It's just the preconceptions of all concerned really. Software houses have convinced themselves that the PCW is a 'business machine' – but then again there is a plethora of games for the much more businessy IBM PC. PCW owners have convinced themselves that 'games' mean Space Invaders and vacuous zapping noises – but then again in our recent reader survey over half of you said you owned a game.

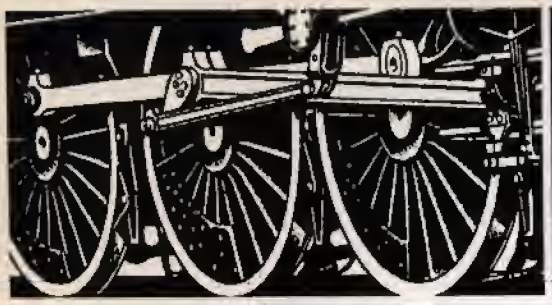
What we need is some intelligent light entertainment to bring the New Year in. In 1988, how about PCW Backgammon, PCW Draughts and a PCW card game pack with Canasta, Rummy and so on? We all bought our PCWs for word processing, but that doesn't mean we aren't humans too.

Here's to a happy and fun new year.

Ben Taylor

8000 PLUS

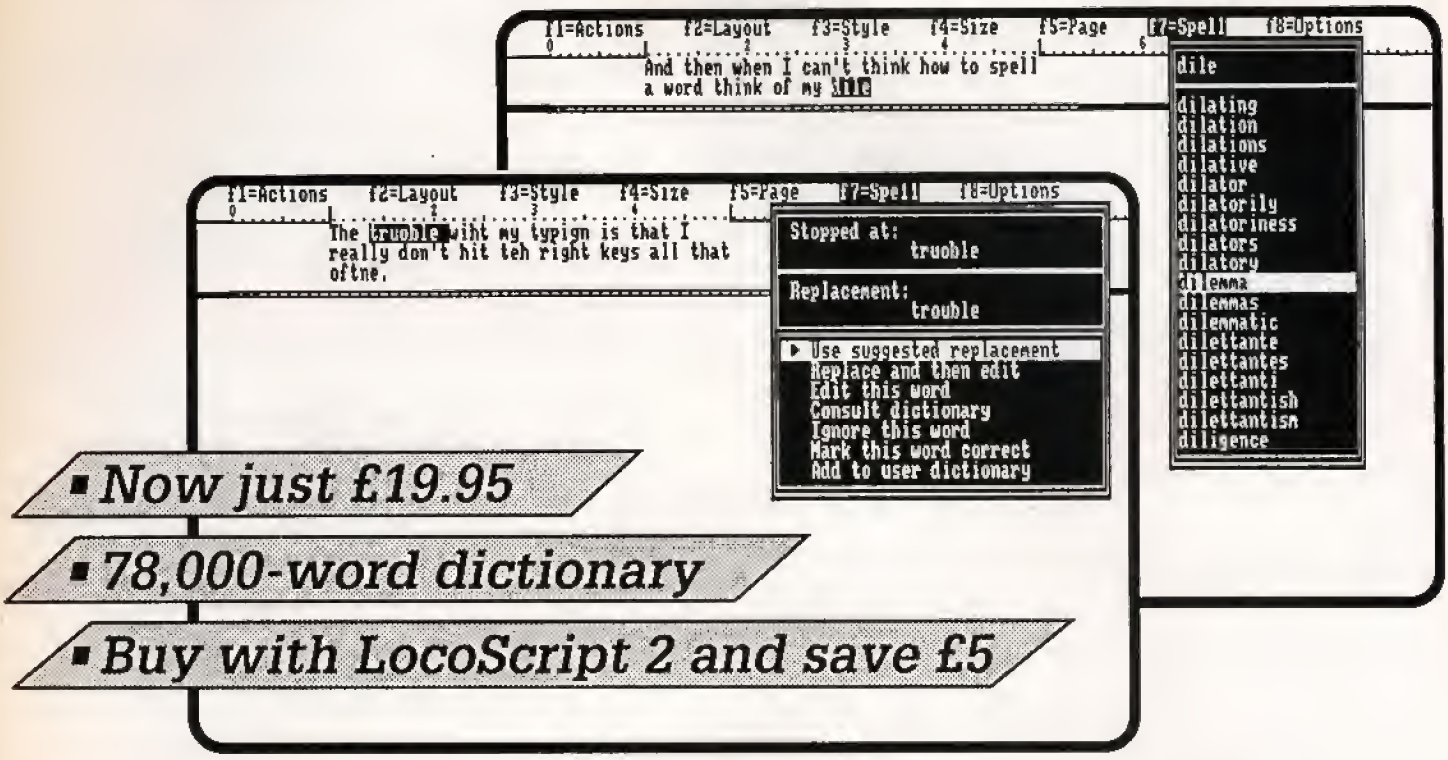
The February issue of 8000 Plus will be on sale Thursday January 21st – break the New Year ice with us.



LocoSpell

from Locomotive Software

The Spelling Corrector and Proof Reader for LocoScript 2 on your PCW8512 or 8256



- *Now just £19.95*
- *78,000-word dictionary*
- *Buy with LocoScript 2 and save £5*

LocoSpell checks your typing against Longman's 78,000 word dictionary. When LocoSpell spots a mistake, you can accept its suggested correction, correct the word yourself, or add it to your own private dictionary.

LocoSpell will run on a PCW8256 or PCW8512 with LocoScript 2 version 2.03 or later. On a PCW with 512K memory the 78,000-word dictionary can be read into memory when LocoScript is loaded, and is then always available until it is deleted or LocoScript is re-started. With 256K memory, the 78,000-word dictionary can only be used from disc, though a 17,500-word dictionary can be used from memory. Locomotive Software recommends the upgrading of PCW8256s to 512K memory for the best operation of LocoSpell. The Locomotive Memory Upgrade Kit is available for this purpose.

To: Nicola Ewart, Locomotive Systems,
Allen Court, Dorking, Surrey, RH4 1YL
Phone (0306) 887902

Name _____

Address _____

_____

_____

Postcode _____

Please send me the following products

☐	LocoSpell for LocoScript 2 (requires LocoScript 2.03 or later.)	£19.95
☐	LocoScript 2	£19.95
☐	LocoScript 2 with LocoSpell	£34.90
☐	Memory Upgrade Kit	£24.95
	Total	_____

☐ I enclose a cheque payable to Locomotive Systems Limited

☐ Charge to my Access Card

Printer peace

Peace has broken out between Amstrad and Epson following threats of legal action when Amstrad started using the letters 'LQ' in the names of their letter quality printers – a designation that Epson regarded as their own.

In a press release from Amstrad it was announced that "An understanding has been reached" and that both companies will continue to use the LQ designation on their printers.

"Amstrad has always recognised that the printer designation LQ in combination with a number is a designation that has been previously used, is presently used and will in future be used on a range of Epson letter quality printers," say Amstrad.

However, Epson have not insisted that Amstrad cease using the LQ prefix. To demonstrate the new-found understanding between the companies, Amstrad have revealed that they plan to launch the LQ5000 (a wide carriage printer) this month, while Epson will be launching the LQ500 (no relation) at the same time.

HEY BOSS – LET'S COMPLICATE THINGS AND CALL OUR NEXT MAGAZINE LQ PLUS"

Amstrad gets serious

The increasing importance to Amstrad of serious computers (including the very serious PCW) is shown up clearly in the company's annual report. This year the 'business' sector has overtaken 'leisure' as the most important part of Sugar's empire.

The turnover from the business side which covers PCWs, PCs and printers has leapt from £115m in 1986 to £277m in 1987, working out at 54 per cent of the total turnover. This is despite the fact that 1986/87 was the first year that the leisure side, which covers CPC computers plus all the video and audio products, has included revenue from the takeover of Sinclair and sales of its Spectrum computers.

Interestingly, despite what is obviously a concerted attack on the North American market by Amstrad (the 9512 was seen in America first and the new portable PC had a launch on both sides of the Atlantic simultaneously) the sales have actually dropped there. The North American market was actually £3.5 m down on the previous year and only represents 2.6 per cent of the company's business. Britain still provides 43 per cent.

In the annual report Alan Sugar admitted that America is "a very dangerous market" and he assured shareholders that the USA would not be allowed to drain company resources and that he would "take a personal interest in the development of these markets."

It certainly seems as though Amstrad will be looking to overseas markets to sustain the amazing growth of the company. In the last four years they have almost doubled their sales and profits each year although Sugar warned that "we must realistically accept that we cannot achieve the doubling effect we have experienced in the past." However he does suggest that if they could achieve the market penetration in foreign markets that they have achieved at home they could boost the turnover five times.

Tantalisingly, while Sugar referred to forthcoming "consolidation and seed planting" he also promised a range of business machines that will penetrate sectors of the market not covered by existing products and "two completely new exciting product areas".

Show dates changed

The Amstrad Computer Show planned for London at the end of January has been delayed for a week because of the delay in installing one computer. Due to the increasing size of the the show it had outgrown the Alexandra Pavilion and is to be held in the Alexandra Palace's Great Palace which is at present being renovated.

But a delay in installing the computer which acts as the nerve centre for the new exhibition complex has meant that the show has had to be put back. The new dates are February 4th to 6th, exactly a week after the dates originally advertised.

The new-look Great Palace will offer 4000 sq. metres of space and the organisers Database Exhibitions expect 15,000 plus visitors and 90 plus exhibitors we'll be there too. For further details and tickets phone 0525 878888.

PCW9512 to PCW8256

PCW9512 owners who want to be able to transfer files to 8256s have problems – the 9512 can read 8256 discs but not vice versa.

To solve the problem Three Inch Software have launched a collection of utilities that are claimed to solve such questions of compatibility. Using their toolkit, called the *PCW9512 Rescue Kit*, they say you can format and write files to single density discs, and so read them on an 8256.

Another area where the kit is claimed to help is where you have 'auto-boot' discs which run on the 8256. These are often games which do not run from CP/M but have to be loaded when the machine has just been switched on or has been restarted – they won't start on the 9512's disc drive.

The answer according to Three Inch Software is to copy it from the original disc to a new disc that will suit the 9512 using one of their utilities. Although admitting that in some cases the protection written in to the software might prevent this, they claim that they have had considerable success with the method.

All this for £9.95. Anyone with compatibility problems will probably want to contact Three Inch Software on 01-546 2754.

Meet the Z88

As a sign of how popular the Cambridge Computer Z88 portable word processor is with PCW owners, a London company *C Port* have just launched a Z88-to-PCW Import/Export kit to take all of the worries out of transferring files between the two computers.

For £24.95 you get a cable to connect the Z88 to the PCW serial interface, and software to make the transfer easy. The CPS8256 serial interface box is not included in the price.

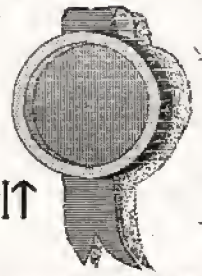
The menu-driven program allows you to easily transfer in both directions (including transmitting batches of files at once) and allows you to run the PCW printer from the Z88 direct.

It also gives you full instructions specifically for the PCW which might prove invaluable to anyone who has grappled unsuccessfully with the Z88 or the PCW manuals.

Calling all Hobbits

Anyone who is having problems producing Tolkienesque runes on their PCW can breathe a sigh of relief following the introduction of *Complement* – a set of fonts for use with Newsdesk International and the Electric Studio graphics program.

Dragonfly Designs have produced a package with Art Nouveau, Art Deco, futuristic and textured fonts, thick and thin capitals and outline fonts. All this and a selection of snip art 'borders' including Celtic patterns. To delight in this plethora of visual stimulae you need only £12.50 and the energy to write to Dragonfly Designs, 58 The Shrublands, Horsford, Norwich.



Post nuclear games

Mindfighter from Abstract Concepts is a text and graphics adventure based around life in Southampton after a nuclear holocaust. You take the part of a young boy who can – if you finish the game – save the world and civilisation as we know it.

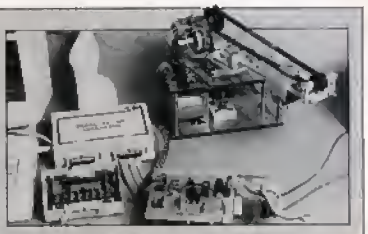
The difference in this game, Abstract Concepts say, is that each character has emotional as well as physical characteristics which makes the game change every time you play. Even the weather can affect the course of the story. One thing puzzles us – how can you tell the difference between pre-holocaust and post-holocaust Southampton?

Interestingly enough, even though the PCW is not the main target machine for Mindfighter, Abstract Concepts do all their program development on PCWs and then port it across to Atari STs and other machines.

Mindfighter will be marketed by Activision in the new year.

Modules Available

SM Engineering (0323 766262), whose PCW hardware interface was reviewed in last month's 8000 Plus, have announced that the 8-bit Analogue to Digital Converter (£39.95) and the 8-bit Digital to Analogue Converter (£29.95) promised in the review are now available. The company have also announced that they have produced a 30 page manual to go with the interface. Here's a picture of the interface driving a robot arm to tempt you.



"Copy me a file, Jeeves"

Kempston have released a new utility program for their mouse under the unforgettable name of 'Jeeves'. Based on the same idea as Write Hand Man the new program is a 'memory resident' organiser which allows you to call up disc file management functions, a calculator, a calendar, a clock or a phonebook while you are using another CP/M program.

Just by clicking your Kempston mouse you can call up Jeeves and then return to your word-processor or spreadsheet where you left it. Jeeves seems aimed more at the general user unlike the programmer biased Right Hand Man. It makes full use of the WIMP environment so that you copy or delete files by dragging icons.

You can also display the clock on screen while using other programs to show just how much of your life you spend staring at the green screen.

Jeeves is available for £79.95 including a mouse, or £29.95 for existing mouse owners. A keyboard-only version to run without the mouse is expected. Kempston are on 0908 690018.

▲ Interrupting a busy session on the spreadsheet to call up the services of Jeeves.

LocoScript 2 – the book!

The country's technical authors are catching up fast with LocoScript 2, and to prove the point two new books on it have just been published.

First off the blocks is *LocoScript 2 on the Amstrad PCW 8256/8512 and 9512* from the redoubtable Ian Sinclair, published by BSP Professional books. It costs £9.95, has 160 pages of detailed instructions for both 8000 series and 9512 users and has a full index. Eagle-eyed readers will be amused to see that the front cover shows a photo of a PCW running LocoScript 1 – oops. For details phone BSP at 0865 240201 or order it form any bookshop quoting ISBN 0-632-02185-3.

The other launch is *LocoScript 2 & Amstrad PCW Computers* by John Hughes (who has written for 8000 Plus in the past). Published by Sigma, it has the distinction of being 'authorised' by Locomotive Software.

Among other features are two chapters on the LocoMail mailmerger, and also a section on general software which now gives details on how to use SuperCalc. It costs £11.95. Phone your order direct to Freephone 3577, or again try bookshops quoting ISBN 1-85058-0979-9.

Loco price cuts

Locomotive software have announced price cuts over their range of LocoScript 2 add-ons.

Previously selling at £39.95 each, the LocoSpell spelling checker is being reduced to £19.95 and the LocoMail mailmerger to £29.95. LocoScript 2 itself remains at £19.95, but a package of LocoScript 2 and LocoSpell is going for £34.90.

The price cuts don't apply to LocoScript 1 versions of LocoSpell and Mail, since it seems that the marketing rights for those belong to Amstrad not Locomotive.

Another goody, of special interest to 9512 owners, is a new LocoMail user guide at £14.95. This will cover all the advanced features like arithmetic, conditional printing and invoicing not fully documented in the 9512 manual, plus detailed worked examples. Phone Locomotive on 0306 887902.

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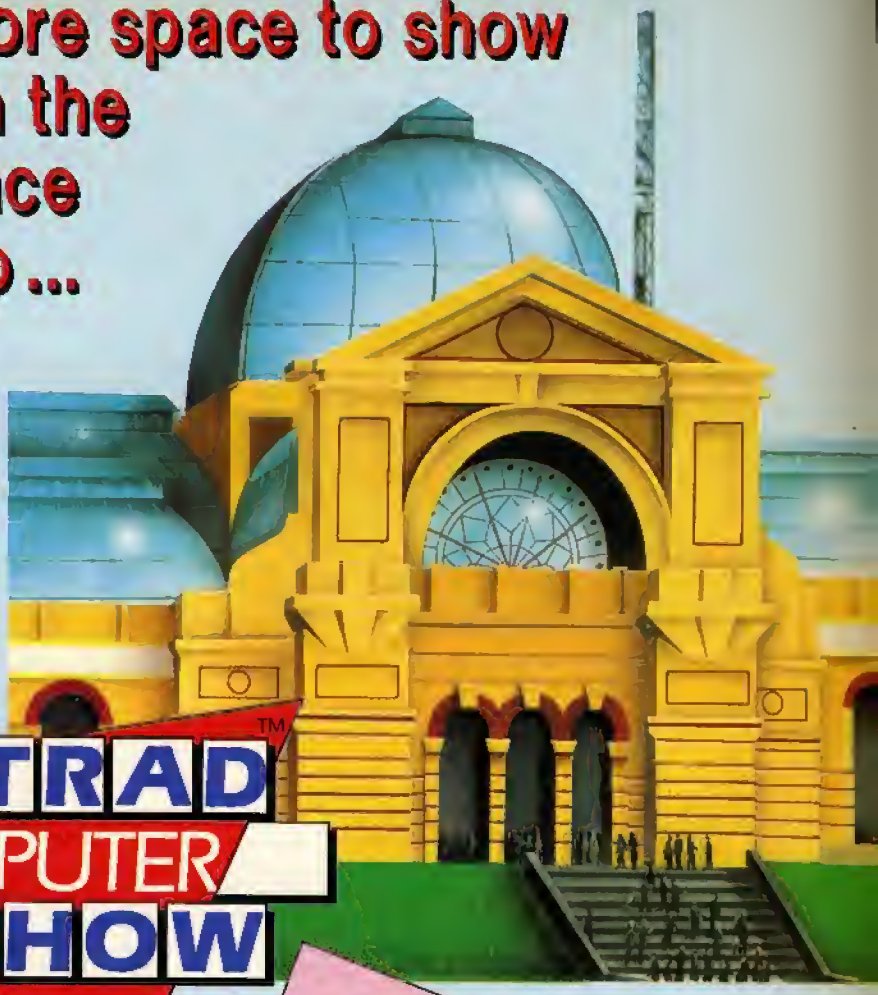

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MAXI MINI OFFICE

Rob Ainsley looks at an all-in-one database, spreadsheet, word processor, graphics and comms pack. Can it be true?

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After the euphoria of printing your first LocoScript letter or running your first BASIC listing subsides, what next? All the magazines talk confidently of spreadsheets, databases, communications, graphics packages and so on. Sure, it would be nice to be able to buy them all, but there just isn't enough time to try them all out, and there isn't enough money to buy one of each.

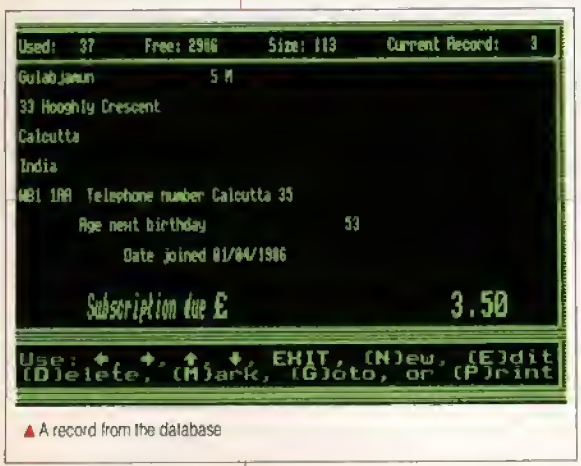
Seeing a gap in the market for a good, economical suite of office-use programs, Database Software have developed Mini Office Professional. This is a follow up to their best-selling Mini Office II pack which has sold exceptionally well on other computers – although *Professional* is a whole new program, not an adaptation. For just thirty pounds you get two floppy discs comprising an integrated package of a database, a spreadsheet, a graphics program, a wordprocessor, and communications functions. It sounds too good to be true.

9512 note

Mini Office Professional will run on the PCW9512, although there are certain restrictions. The graphics module will produce the results on the screen perfectly well, but unless you have a dot matrix printer of course you can't print them out!

The database

Everybody who has a PCW has the LocoScript word processor, so it's usually a database which is the popular first choice of new software. The Mini Office database is a pretty standard card-index type, much the same as First Base, for example. You set up your fields (name, address, telephone number) and choose the type of field – text string, a number, a date or an amount to be calculated from some other fields, such as balance of account. The range of functions available for calculations is powerful and includes IFs and NOTs as well as the arithmetical operators. Impressively, you can have up to 255 fields (the high-powered dBase II at £100 can only take 32 fields) so you could use this for a variety of specialist applications, for example logging results from detailed questionnaires.



▲ A record from the database

You are shown a blank 'card' and mark out the position and size of each field using the cursor keys – you can also insert text headings if you want. The functions of editing data, sorting, printing out 'reports' from your data and so on, are chosen from menus, and all are done quite easily and logically.

As with any good database, you can select certain records over one or more fields – for example, all your London customers, or all Manchester customers who owe you money – and make them into a new database, leaving the old one intact. You can sort too, over a combination of fields, so you might have your customers re-sorted in order of how much money they owe you, with those owing the same amounts (for example nothing) sorted by region and sub-sorted alphabetically within each region.

Handsome prints

The print facilities allow you to print out the contents of each card you have defined, with nice touches such as having the option of putting the field names in italics. You may wish to print only certain items of information from each field, for example names and addresses only for a labelling run. In this case you would use the 'Reports/Labels' option which allows you to select any combination of fields and print them out a label-sized form with additional text if required. A thoughtful feature is that you can select a 'test print' to print out just the first two rows of labels, and hence check the alignments.

You can do simple arithmetic on number stored in fields, and you can also ask for the total of some field over all the records – so you could find the total amount of money owed you, for example. A novel feature is the ability to change all figures in any field at a stroke: for example, if you wish to raise subscription rates payable, you can add £1 to this field in all records automatically, without having to alter each one! You can use data from your database to input to the word processor for use in simple mailshot runs.

The only real minus point is that there doesn't seem to be a way of importing or exporting data, so you can't use data you've prepared under another database in this one or vice versa. Overall this is an excellent database and just by itself would be well worth £30. There are some nice touches to it and the ability to transfer data to the word processor part of Mini Office relatively simply will be invaluable to many users.

The spreadsheet

A spreadsheet – as regular 8000 Plusers will know – is a computerised doodling pad where you enter rows and rows of figures and can add them up, average them, and do a host of tricks to see what would happen if only you got that bank loan.

The spreadsheet and the graphics modules in Mini Office go together nicely. The idea is that you can make a file of your spreadsheet data and use the graphics module to make it into a pie-chart or histogram, which is a lot clearer than a column, of figures. The spreadsheet itself is a pretty standard one with the usual features of entering numbers or text, doing arithmetic and 'replicating' (copying) entries etc.

There are commands from A to Z ('automatic cursor mode' to 'zero all unlocked numeric cells') and most of them are reasonably easy to remember. Using 'auto update', you can have all your recalculations done automatically (ie. when you alter any entry on an existing spreadsheet all the figures

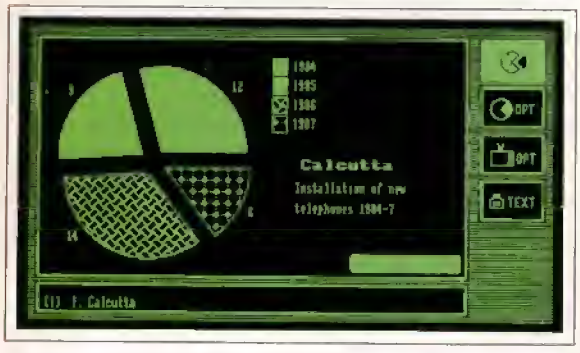
affected by it are immediately changed) or have it done manually, only when you require it, by pressing the [f3] key.

When you come to print out your spreadsheet you can select various options such as draft or high quality, whether or not to print row or column headings, set the width of the printer, highlight certain rows or columns or specific cells by printing them in bold, etc.

Well, print me sideways

A particularly welcome feature of Mini Office's spreadsheet is the ability to print out a spreadsheet sideways. Spreadsheets can get quite wide, with too many columns to fit across an A4 sheet. By selecting the 'sideways' option from the print menu, you can rotate the whole spreadsheet through ninety degrees as it is printed, so that the columns come out down the page and the rows across (if you use continuous stationery, you can print out massive spreadsheets this way).

There's no 'sort' facility (as there is on most other spreadsheet programs) so you can't rearrange your columns into alphabetical order, though this is hardly a major problem for the average user. According to the blurb on the box, the



maximum size of spreadsheet which can be handled is 320k, which should be big enough for most purposes – SuperCalc's maximum is around 50k.

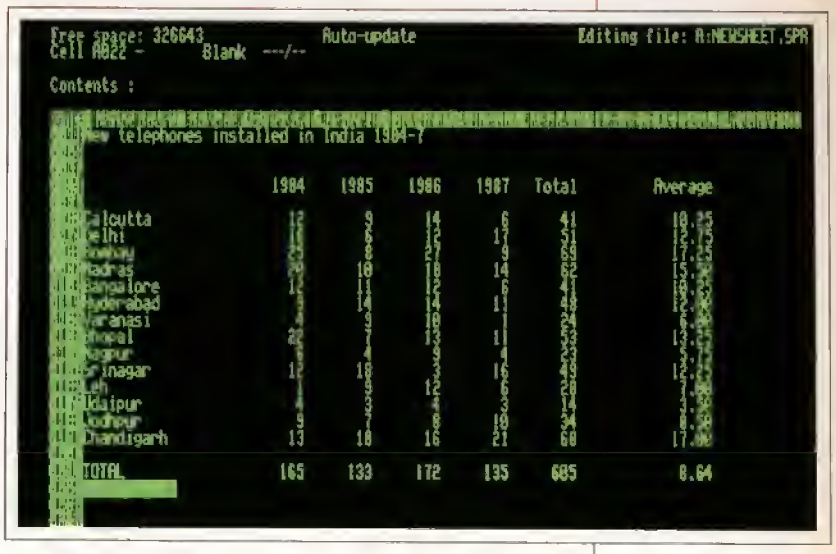
You can save your spreadsheets to disc, of course, and on Mini Office you have the additional option of saving part of a spreadsheet ('a window') for conversion into a graph – say the months January to December and the corresponding sales figures for each month.

Mini Office's spreadsheet has some excellent features not found on other more expensive spreadsheets, is easy to use, and can produce smart and efficient-looking results.

Graphically described

Having set up a data file from your spreadsheet, you can use it in the graphics program, or alternatively you can make up a data file just by typing in entries at the keyboard and use that. The graphics module will then turn these figures into a pie chart, a line graph, or a bar chart. You can include any text on these charts or graphs at any point, with the usual choice between double-width, double-height or normal characters, in normal, bold or dim text. You also have a selection of borders to place around your text. Screens can be printed out normally or sideways, or saved for later use, and you can even select 2- or 3-dimensional display.

The graphics side is one area where the manual is pretty weak, and you'll probably need a lot of experimenting or phone calls to database to get your first graph of a spreadsheet's results. This is not a full-blown graphics package – you can't draw or create shapes of your own, as on a purpose-built program; it's just an extremely useful add-on to the spreadsheet, and a useful utility for illustrating figures. Being simple and easy to use yet powerful, this



would be ideal for business reports and the presentation of data in general.

The word processor

You've probably already got a word processor, so the one supplied with Mini Office won't be the main reason for buying the package. However, since it ties in closely with the rest of the Mini Office utilities there are arguments for learning to use it at least as an alternative to LocoScript.

According to the advertising blurb, the word processor's three winning features are that it's lightning fast, displays a word count while editing and has double height characters –

▲ Setting up a 'mailmerge' skeleton on the word processor

DIY manual

The accompanying manual to all this is a slim, compact 67-page effort, and being ringbound it folds flat for easy reading. The features of each program are described reasonably clearly, with an example of each, though there really isn't enough detail for folks who've never used a spreadsheet before, or who don't know what a database is. The sheer power of each of the programs means a lot of explaining has to be done, and while 67 pages is a handy set of flashcards to the functions on each module, to do the suite full justice would take something like twenty times that amount (the 9512 manual, for example, takes over 600 pages to describe LocoScript/Spell/Mail and CP/M in comprehensive but admirably brief clarity).

Having said this, Mini Office is a well-designed package, and once you have mastered the basics of how the menu system works you should be able to find your way around with a little common sense.

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the wording has obviously been aimed at disgruntled LocoScripters. However, as there isn't actually a word counter at all on Mini Office, still less one you can see while editing, the advertising copy writers don't seem to have talked to the programmers recently. And you can do double height text, but only in draft quality.

The good news though is that it's every bit as fast as it's claimed – so call it one and a half marks out of three. Even LocoScript 2, though fast relative to Loco 1, can't compete; you can zip from top to bottom of your 60k document in under a second. The search-and-replace works fast too.

Unlike LocoScript's menus, the word processor uses those 'control codes' you either love or hate – [SHIFT]-[ALT]-H defines a header, [ALT]-H marks the end; [SHIFT]-[ALT]-J justifies text; [EXTRA]-M marks a block of text and [SHIFT]-[ALT]-[DEL] deletes the block thus defined, and so on. As with WordStar or Protext, the codes seem stupid and difficult until you get used to them, when they seem logical and easy.

Reversed priorities

There are some pleasant surprises in the word processor too. You can print out in reverse video, ie., white letters on a black background; and there are those double height letters. Clever use of the PCW screen puts all the control characters (like the returns or tab characters in LocoScript) in a dim dark green for clear contrast with text as you read. Another splendid feature is the ability to print out to the screen an image of the final printed version, complete with headers, page numbers, double height letters, italics, bolds and so on, so saving much wasted paper and frustration.

The 'disc management' system is similar to LocoScript in that you have the directory displayed and can move the cursor over the file you wish to edit or print. These main functions are chosen via a menu. Mini Office files cannot be read by LocoScript, or vice versa, unless you make and intermediate ASCII file.

The most convenient use for Mini's word processor is integrating it with the database. You can use customer files, for example, created under the database, and set up a mailmerge letter skeleton with blanks for the computer to fill in with details from each customer – name, address, products, balance, etc. It's *not* a full mailmerger, and does not claim to be, because you can't do conditionals such as 'only print this paragraph if the customer hasn't paid for six months'; however, you can approximate this ability by selecting certain sets first from the database (eg. customers who haven't paid for six months) and do a letter for each set.

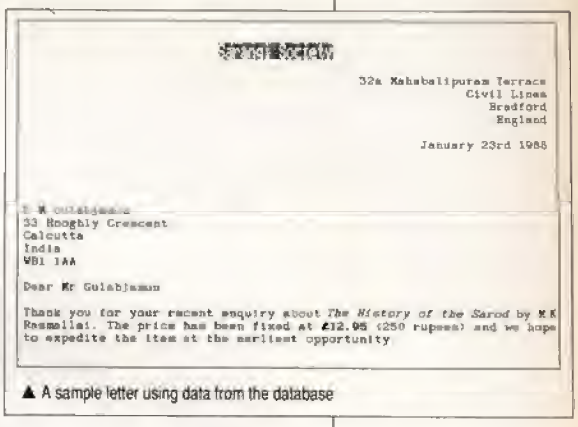
It's a good word processor, but it can't be expected to compare with LocoScript or Protext, of course. You may still prefer the convenience and familiarity of LocoScript for much of your work, or the power and flexibility of Protext for your bulk text processing, but as an integrated part of the database/spreadsheet/graphics system of Mini Office it is very useful.

The communications kit

Gearing up your PCW to speak to the outside world everyone's Walter Mitty dream. Unfortunately this usually involves you in the expense of buying a modem, paying phone bills and struggling with generally unfriendly software.

The comms software provided with Mini Office is as comprehensive as many other packages on the market, and certainly offers far more than Sage Chit-Chat, one of the current 'standard' packages. It can display both ordinary text screens and the 'Viewdata' block graphics screens used by Prestel. For the cognoscenti, you are offered baud rates from 75 to 9600, separately set for receive and transmit, straight terminal emulation (for use with Telecom Gold) and XMODEM and KERMIT file transfer protocols for error-proof transfer of long files.

You can save setups under names and recall them, so once you have worked out the correct baud rates/parities etc. for a service you can forget them again. You can define keys, so set up one key to produce the famously long Telecom Gold passwords for you. Beginners will be pleased to know that Mini Office's comms setup comes preconfigured to let you use the popular Telecom Gold and Prestel services.



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▲ A sample letter using data from the database

It's getting a bit tedious ending every section by saying, "This part alone is worth £30", but it's true. Why spend £70 on a comms pack when Mini Office Professional does it all quite adequately?

The epoch making Mini

There will be a lot of shaking heads in disbelief at this package. Any one of the programs could be sold at the price and get a satisfactory review – to have the five together for that price is simply astonishing. Each of the programs is well-written, easy to use, and there are many innovative features not found on more expensive packages. On a higher level, you have the convenience of integrating your database with your word processor, and your spreadsheet with your graphics module, without having to move into another package. If only there'd been a word counter, as the box claims there is, there would have been nothing to find wrong with it.

Small businesses and clubs using PCWs will find the database ideal for customer records, the spreadsheet invaluable for budgets and projections, and the graphics package great for reports. For anyone else, if you're thinking of buying a good standard database or spreadsheet, it's difficult to think of a reason to buy anything else – and you'll be getting four other excellent programs effectively for free. For really heavy in-depth demands Mini Office won't replace the heavyweights like LocoMail, dBase, Masterfile, or Protext, but as an all-purpose package it's in a class of its own.

Mini Office Professional has done for software what the PCW did for computer hardware. It has broken new ground in good program design and value for money. If this doesn't become a standard business package, there's no justice.

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- Can produce graphs of spreadsheet data
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MINUSES

- The range of features is too big for the manual to cover
- No wordcounter in the word processor

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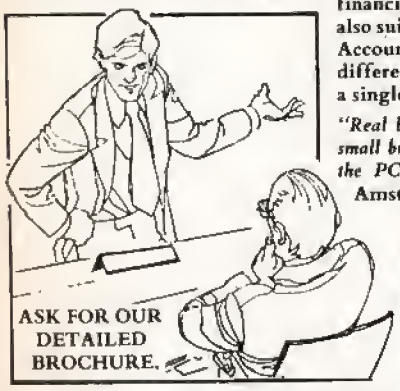

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DRAWING ROOM

The pen is mightier than the sword, but is the light pen mightier than the mouse?

CADMASTER LIGHT PEN

£29.95 ● Trojan Products (0792 205491)
● All PCWs

Despite the increasing uses of mice for creating graphics on the PCW many people still find the most natural way of drawing on the green screen is to use a light pen. However it has to be admitted that certainly at first attempt the Cadmaster light-pen does not really seem a natural tool for drawing.

The Cadmaster light pen plugs onto the expansion port at the back of the PCW. There is no 'through-connector', so you can't use other expansion units at the same time, like a serial interface box. When running the program, the PCW screen is divided in to three regions with Cadmaster: the menu, drawing and message areas. At the top of the screen is a list of menu choices like 'box', 'circle', 'text' and so on, with a blob beside each. To make a selection you point the light pen at the choice and wait for a second until the software registers your choice.

If you have decided on some drawing action, you then have to use the pen to pick the screen position and dimensions for what you are drawing. You have to get used to the idea of 'arming your scan'. Before positioning anything on screen you have to 'point' at a menu choice marked 'Scan', which acts a bit like the [ENTER] key on the keyboard (using the [ENTER] key would be a lot easier). At this a massive black line leaps from the side of the screen and hopefully stops at the point where the pen is pointed. After a short time the program fixes the point at the current pen position.

This method is fine (if a little slow) for positioning shapes or boxes for copying but it does make free-hand drawing impossible. The situation is made worse by the fact that the cursor is so large you can only guess where a thin line is being drawn behind this massive shape. For other functions you have the choice of a 'target' cursor – a cross-wire version that at least gives the impression of being more accurate.

Trojan have made it a point of honour not to use the keyboard at all – everything is by pen-and-menus. This is in fact tedious, and being able to use the cursor keys for fine tuning of position would be a real boon.

Learning curve

The pen-and-menu system is cumbersome to start with, but a little experience speeds things up – like realising you have to point the pen fractionally *below* the spot you really want. However, even after considerable testing we were still not able to fathom how to draw a line 'free-hand' with the pen that went where it was supposed to go. At best it moved at random and at times it seemed to be able to guess which direction you wanted it to go in and went the opposite way. The handy 'Undo' function was by far the most used function.

With any 'art' package that involves switching individual pixels on or off there are always going to be problems getting the exact pixel you want (they are pretty small after all) and with some it is probably easier to use the 'zoom' facility to make fine corrections.

Trojan provide an excellent zoom facility with the choice of blowing up the area by 4,6,8 or 12 times. It also displays the section of screen you are working on at normal size to let you see the effect of the changes while they are made.

However this has been spoiled by making the user follow the slowest, most tortuous procedure possible to make any changes. For a start the only way you can move the cursor round the screen is by activating the little cursor squares – not a very quick or accurate method. You then have to choose whether each pixel you want changed should be black or green one at a time. With the major changes that could be needed cleaning up any attempt at free-hand drawing this way could quickly become impractical.

It is a pity that these rather major faults spoil a package that could, on a simple level, have worked quite successfully. There is a full range of shapes that can be achieved (box, triangle, circle, ellipse or cube) and there is a variety of thicknesses of line. There are 56 different fill patterns to chose from and you can create your own if you can't find one to suit.

Even the text facility allows you to ring the changes quite successfully. Although there is only one type face you can vary it, in theory, to 64 different sizes. This is achieved by varying the width or the height by a factor of eight. The program gives a reasonable choice at the time of printing producing a picture vertically or horizontally, large or small and at high or low density.

Overall, Cadmaster is cheap, but its design faults render it unusable as a serious drawing program.

PLUSES
- Good choice of type sizes and fills
- Inexpensive

MINUSES
- Slow and complicated procedure
- Very imprecise position control, making free-hand drawing virtually impossible.
- Not allowing any key-press commands is slow and frustrating.

RANGE OF FEATURES	■■■■■	PERFORMANCE	■■■■■
EASE OF USE	■■■■■	DOCUMENTATION	■■■■■

8000 PLUS VALUE VERDICT ■■■■■

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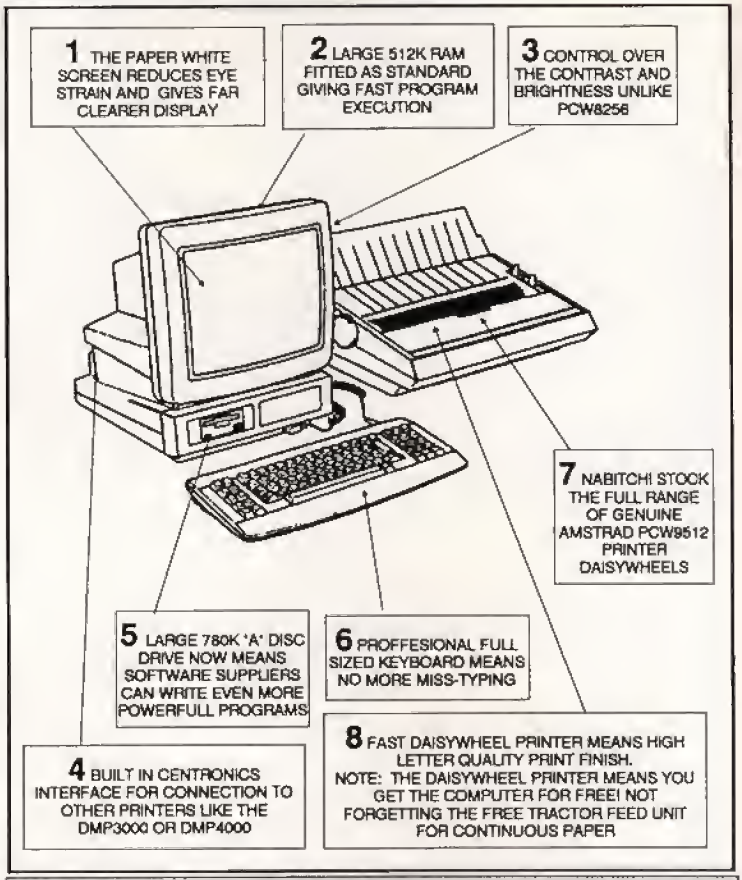

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Nabitchi have always been known as THE PCW people. We intend to uphold this tradition for many years to come. The launch of the PCW9512 has again assured us all that the PCW tradition will live on. Once again Amstrad have given us a machine that caters for all tastes. It has a vast range of business software from accounts to desktop publishing. It has a full 512K RAM to accomodate the most advanced programs of the future. The 3" 780K disc drive gives vast data storage on the most reliable form of magnetic media. The full size professional keyboard means that typing is made easy. The 15 inch daisy wheel printer gives perfect letter quality on page sizes up to A3, there is no longer a limit to the number of fonts, simply change the daisy wheel. The ever popular Locoscript 2 with spell checker and mail merge means that even our managing director David Rathbone can now write a letter. The paper white screen gives far clearer characters and thus reduces eye strain with contrast and brightness controls to adjust the display to your personal requirements. Nabitchi computing are the biggest PCW company and we intend to stay that way.

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PRINTER ENVY

In the early days of the PCW life was simple. Everyone had the standard dot matrix printer and that was that. Real computer Yuppies bought themselves a fancy fast printer or a daisywheel, but everyone else just got on with life. Now, since the advent of the 9512, PCW owners are faced with the horrifying dilemma that perhaps they really have the wrong type of printer. Might the 8000 owner really prefer a real letter quality daisywheel? Does the 9512 owner feel restricted by not being able to print graphics and rough quality drafts?

The good news is that all models of PCW can print to both kinds of printer. The cost of the hardware is continually falling, and now you can pick up a good dot matrix printer for less than £200, and a daisywheel for not much more.

The case for dot matrix

Dot matrix printers have several advantages. First of all, they can print out graphics. Although when the PCW was first produced the graphics side was not seriously considered it is becoming an increasingly important element. You can't have failed to notice the boom in 'desktop publishing' which has taken off recently, and certainly to print out the results of your beautifully laid out newsletters with headlines and pictures you will need the services of a dot matrix printer.

The dot matrix also has important advantages to those people using the machine mainly as a word processor. It allows you to mix plain text and italics and different pitch sizes with impunity, and in draft mode it is a very fast method of getting words on to paper for a quick proof-read.

The flexibility is achieved by the way the dot matrix printer head is made up. Just as the letters on the screen of a PCW are made-up of a collection of dots the characters on paper or the graphics produced are made up of tiny dots too. Everything printed by the dot matrix is broken down into dots, so it is relatively easy to change type faces, for instance, just by telling the printer to print a different set of dots for a given character. The better the dot matrix printer, the finer the dots are and the better the character definition looks.

The case for daisywheel

The obvious advantage with a daisy wheel printer is that the finished product looks really impressive – the smart finish that an electric typewriter can give you. This makes it appeal mainly to the business user who is solely interested in producing a neatly typed letters, or for professional writers who consider the appearance of their finished copy important in creating the right impression.

The daisy wheel printer produces the letter by striking a ribbon against the paper with a letter die in the same way that a golf-ball typewriter does. The price you pay is loss of flexibility. Using italics, or changing typeface, can only be achieved if you have the correct print wheel containing the characters you want, and it means that you will have to stand over the machine ready to slip the new wheel in at the correct moment. This is assuming that the wordprocessing software you have supports this – there is no way to ask LocoScript, for instance, to pause printing while you fiddle with print wheels, other than at the end of a page.

Printers and LocoScript 2

What has really opened up the printer market to PCW owners is the launch of LocoScript 2. LocoScript 1, standard issue on the 8000 series machines, only allowed you to use the built-in printer, but with Loco 2 you can now send printed output to more or less any printer.

LocoScript 2 as shipped on its 8000 series master disc is set up only to use the standard printer, and to make it print to your new one you will need to do a bit of work. If your printer is a dot matrix the odds are it is 'Epson FX80 compatible' (this being the industry dot matrix standard). If a daisywheel, it will be 'Diablo 630 compatible' (the standard for daisywheels). Look on side 2 of the Loco master disc and you will see some files ending '.PRI' – FX80_NLQ and D630.PRI.

These are the 'printer drivers' – the files which tell LocoScript how to use your printer. Copy the .PRI files for your printer from side 2 onto group 0 of side 1 of the LocoScript start-of-day disc. If you have a dot matrix you will need the FX80_NLQ.PRI file, or take D630.PRI instead for daisywheels. Also copy the file INSTALL.DRV. Now if you restart the PCW, your alternative printers will be available. Just use the [PTR] and [15] menu to select the printer you want.

Recently Locomotive have been spending a bit of time and effort producing a wider range of printer drivers to support less common printers. If you have a strange printer – maybe an electronic typewriter with a 'printer interface' – it might be worthwhile asking Locomotive whether they can provide a suitable printer driver for you.

One footnote for those who have used the old 8000 series printer: don't presume your fancy new dot matrix can do everything that the PCW's could do. Because the PCW printer was very closely linked with the machines hardware and software, it could be made to produce a wider range of characters than normal. The fancy Cyrillic characters in Loco 2 will probably not be found on many printers for instance, and it is also not possible to produce screen dumps with [EXTRA]+[PTR] the way the 8000 series printer does.

ER

For the price of a printer, you can have the advantages of a 9512 *and* an 8000. Alec Rae looks at five models to tickle your fancy, whatever PCW you own.

You can produce simple effects with daisywheels, such as underlining and emboldening text. Depending on the printer you can also alter the character pitch from 17 per inch to 10 per inch or more, although this only affects the character spacing, not the size of the characters. 17 pitch text is usually unreadable with a standard size print wheel. Some daisywheels offer the vague chance of printing out graphics by using the full stop as a single dot, but this is slow and usually not very successful.

The real cost

How is that when you pay only £299+VAT for a complete PCW8256 with a printer, non-Amstrad printers alone can easily cost more than that? What you get with a PCW is a simplified stripped-down version of a standard printer that is tied completely into the PCW software. This is how Amstrad manage to manufacture them so cheaply.

It means that you cannot use use your PCW printer with any other computer. Indeed, you can't use an 8000 series dot matrix with a 9512, nor vice versa. And when you buy another printer life is a bit more complicated than just unplugging the Amstrad printer and plugging in your new one.

For a start you will have to find some way to link it to your PCW. With a 9512 that is no problem because there is an inbuilt parallel port (also called a 'Centronics interface'), but 8000 series owners will need to invest in a special interface box. This is a unit which plugs on over the expansion port at the back of the PCW, and costs around £60. Amstrad's own version is called the 'CPS8256' interface. No matter which machine you have you will still have to find a lead to attach the printer to the expansion port – some printers provide one as standard, but otherwise it could cost £10 to £20. Any of the printers reviewed here will work with any PCW – 8256, 8512 or 9512.

Sometimes when you buy a printer you will be asked whether you want it to run with a 'serial' or a 'parallel' port. Make sure you ask for a parallel (Centronics) version. It is possible to run serial printers from a PCW, but for a start the 9512 does not have a serial port as standard, and secondly serial printing is a real sweat to set up. Do you know what baud rates, stop bits and parities are? No? That's why you don't want a serial printer. It is also the case that LocoScript 2 will only work with parallel (Centronics) printers.

Amstrad DMP3160

● via Amstrad dealers

List price: £228.85 ● Target price: £200

With Amstrad's general good reputation for providing value for money it is pretty natural that new 9512 owners should look first at one of the new Amstrad dot matrix printers. However, it whether this is sensible depends on what you want from your printer.

The DMP3160 is quite good at producing graphics, its output is crisp and black without the scanning lines that sometimes plague graphics output. However, should you want to actually use the character printing you may be disappointed.

For a start the high quality ('NLQ') face must rank as one of the most eccentrically designed typefaces of all time. The first thing that strikes the eye is that the letters `i` and `t` look as if they are in the wrong type size and that the letter `p` is too high and the letter `d` too low on the line.

For technical reasons best known to Amstrad, it seems that you cannot use bold when printing in high quality. A quick reference to the manual shows you that you cannot get italic in NLQ either, although our standard test file seemed to deny the manual and actually print italics. A quick phone call to Amstrad assured us that this was impossible. The fitting of the ribbon is also awkward and could be messy. To cap it all it gives the most annoying lengthy series of bleeps imaginable every time it runs out of paper.

Although not the quickest of the printers reviewed, the draft quality is quite legible and the graphics quality is reasonable. Where the DMP3160 is unique (and good) is with its 'flat-bed' style of printing. This means that the paper is fed in flat and the print head is mounted vertically so that the printing is effectively done parallel to the tabletop. This has the advantage that you can feed thick stationery or modest card into the printer since it doesn't have to be wrapped around a roller.

PLUSES
- Flat bed printing good for thick paper
- Connecting cable good for a 9512 supplied
- Fair quality graphics and draft text

MINUSES
- Eccentric design of high quality print font
- No bold available in NLQ
- Ribbon fitting is fiddly
- No NLQ/Draft switch on the printer itself

RANGE OF FEATURES ■■■□□ SPEED ■■■□□
EASE OF USE ■■■□□ DOCUMENTATION ■■■□□

8000 PLUS VALUE VERDICT ■■□□□

Prices

All prices quoted in this article are manufacturer's prices inclusive of VAT. Printers seem to be heavily discounted, so you will usually find them for less than the list price if you shop around. A typical price is also shown with each model.

Panasonic KX-P1081 ● Panasonic (0753 73181)

List price: £281.75 ● Target price: £200

Despite its recommended price the 1081 dot matrix is a printer that seems to be discounted quite highly and shopping around could make it the cheapest of the three dot matrix printers tested. It also has a number of other features to commend it.

It can't be faulted on speed, in fact proving to be the fastest printer of the three dot matrixes tested, in both draft and high quality. This is despite the fact that by the manufacturers' official speed figures the others ought to outperform it!

Unlike the PCW printer you can change from draft to NLQ at the touch of a switch on the printer itself, so you don't have to worry about sending complicated commands from whatever software you are using. There is a tear-bar fitted over the platen which seemed to snag single sheets of paper as they were feeding in, but presumably paper loading is just a matter of practice.

Both in-built type faces (draft and NLQ) are pleasant, regular and readable although the NLQ shows slight tendencies to eccentricity – especially in the j, p and q. Like the Amstrad DMP3160, the Panasonic will not print out bold in NLQ, but it happily gives you a very satisfying italics. Most importantly it gives proportional spacing in both modes without problem.

Although it is difficult to make too close comparisons on graphics as each printer varies considerably according to the type of picture being printed, the Panasonic picked up the least detail in our graphics printing test. The quality was still quite acceptable though.

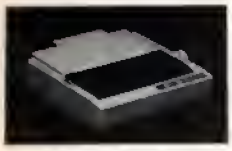
PLUSES
- Pitch/quality control buttons on the printer
- Fastest printing of those tested
- Autoloads single sheet paper

MINUSES
- Least detail of the printers in graphics
- Paper feeding problems with the tear bar

RANGE OF FEATURES ■■■■■ PERFORMANCE ■■■■■
EASE OF USE ■■■■■ DOCUMENTATION ■■■■■
8000 PLUS VALUE VERDICT ■■■■■

Star NL-10 ● Millbank (01-847 4151)

List price: £285.20 ● Target price: £230



The Star NL-10 must rank as the most sophisticated dot matrix printer we tested. Although not the fastest it did produce probably the most readable text in draft, and the NLQ actually approaches real letter quality.

The NL-10 will appeal to those looking for that little bit extra from their printer. It has a wide range of features available from touch sensitive buttons on the printer (the ones that make you feel you're flying a space ship) and it has a solid feel about it that suggests reliability even with heavy use.

The control panel allows you to select bold, draft or NLQ and it even gives you a choice of three column widths when in printing in draft (80, 96 or 136 characters wide). However in high quality it does not allow you to print in bold or in proportional spacing. The italics on the other hand is pleasant to the eye.

If you are buying a Star one thing to check is that the cost you are quoted includes the price of the printer's own Centronics interface cartridge. This is because Star sell a variety of different interfaces in the form of plug-in cartridges to suit connections for different computers. The one you want is the standard Centronics one, normally included in the price.

To make former 8000 series owners feel really at home it uses printer ribbons cartridges just like the ones that Amstrad used to make.

PLUSES
- Many functions can be chosen from the control panel on the printer.
- Good readable type-face
- Autoloads single sheet paper

MINUSES
- No proportional spacing in NLQ

RANGE OF FEATURES ■■■■■ PERFORMANCE ■■■■■
EASE OF USE ■■■■■ DOCUMENTATION ■■■■■
8000 PLUS VALUE VERDICT ■■■■■

Panasonic KX-P3131U ● Panasonic (0753 73181)

List price: £385.25 ● Target price £280

Of all the printers on test, this one must rank as the machine that needs the least computer expertise to work. Panasonic have laid everything out so well that the most ignorant beginner should be pushed to get it wrong.

The KX-P3131 is a Diablo-type daisywheel printer. A rank of multiple choice selector switches allow you to choose normal or justified text, set left and right margins, select the pitch (10, 12 or 15), or even proportional spacing and choose either 1, 1½ or 2 line spacing. You can even have one of three settings for the impact force of the printer.

This is particularly useful for people using a less sophisticated word processor than the PCW – which does the hard work for you anyway – but it still means that even if you are using software which doesn't explicitly cater for daisywheel printers and you don't know your escape codes from Morse Code you can still make the machine to do what you want it to do.

Printing is marginally faster than the standard 8000 series dot matrix printer in high quality mode, but of course there is no draft mode. The text is well rounded and clear and just reminds you what font designers can do when they aren't restricted to cramming every character in an 8 by 8 dot box. It can take any Diablo 630 daisy wheels offering a wide range of type faces for not much more than £5 each.

As with the Panasonic dot matrix it is worth while shopping around as you are likely to find it quite heavily discounted.

PLUSES
- Features controlled from printer
- Automatic paper feed
- Wide range of alternative wheels

MINUSES
- Comparatively slow

RANGE OF FEATURES ■■■■■ PERFORMANCE ■■■■■
EASE OF USE ■■■■■ DOCUMENTATION ■■■■■
8000 PLUS VALUE VERDICT ■■■■■

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Gakken GPR 2000 ● Dataplus (0242 573573)

List price: £228.85 ● Target price: £215

The Gakken printer is actually quite an old player, since the same printing mechanism has been available for a number ot years in casings with various other names – Daisystop, Ushida etc., depending on who was marketing it.

Although not having the good looks and sophistication that the Panasonic offers it is quicker and usually a bit cheaper. The Gakken, a Qume-type daisywheel, doesn't have much in the way ot fancy margin settings or auto-sheet feeding, but it does print a little faster than the Panasonic.

LocoScript has recently included a Qume printer driver specially for the Gakken. Dataplus also sell a special PCW users pack with the printer, parallel interface, a cable and a copy of LocoScript 2 all you need to get going for £286.35.

The printer comes with two standard wheels, a Courier 10 – identical to the one with Panasonic – and a Gothic 12 both ot which provide attractive type taces. Should you want something a bit more exotic you can buy any 'Qume' compatible daisy wheels – available for £6 or so each.

PLUSES
- Fast printing
- LocoScript 2 starter kit available
- Comes with 2 print wheels as standard

MINUSES
- Qume printers less common than Diablos – awkward for some CP/M programs

RANGE OF FEATURES	■■□□□	PERFORMANCE	■■■■□
EASE OF USE	■■■□□	DOCUMENTATION	■■□□□

8000 PLUS VALUE VERDICT ■■■■□

Printers and CP/M

When you buy your new printer, you won't necessarily be able to plug it in and go straight away. However, it is simple enough in practice. Using DEVICE.COM from your CP/M utilities disc (on side three of the master discs for 8000 series owners), as soon as you start the PCW up type `DEVICE LST:=CEN`. This is telling the PCW to send everything for the 'listing' device (or printer as we modern computer buffs call it) to the Centronics port instead ot the standard printer.

Should you wish to switch back to the standard PCW printer, the correct command is `DEVICE LST:=LPT`.

Once set up, almost all PCW programs should be able to print on the new printer with their usual 'print' commands. Most software written for PCWs expects an 'Epson' type dot matrix (as the old 8000 series printer is), so you may have trouble printing to daisywheels unless your program specifically has a daisywheel printer option. Most word processors do have such an option.

Leading question

Since the introduction of the 9512 there is no such thing as a 'PCW to printer' lead, as the 8000s and 9512 take different ones.

For the PCW9512, all you need is a standard IBM printer lead, which has a Centronics plug at the printer end and a 25 pin male D-connector at the other. These leads are very common.

For a PCW8256/8512, when you have fitted the CPS8256 interface box you will need a 'Centronics-to-Centronics' lead, ie. with a Centronics plug both ends. These leads are less common, so make sure your dealer knows what you want it for.

Time trials

Here is how the printing speeds compare for the various printers on test this month. All the speeds quoted here are for the same 1000 word document, which was chosen to be typical of the kind of text most people print. This is thought to be a more accurate test than the 'characters per second' figure normally quoted as it takes into account time taken for carriage returns, paper feeding etc.

	Speed in draft	Speed in high quality
Dot Matrix		
PCW8000 standard printer	1m 53s	7m 40s
Amstrad DMP3160	1m 34s	5m 41s
Panasonic KX-P1081	1m 16s	5m 00s
Star NL-10	1m 22s	5m 53s
Daisy Wheel		
PCW9512 standard printer	n/a	6m 16s
Panasonic KX-P3131U	n/a	7m 24s
Gakken GPR 2000	n/a	6m 19s

Print samples compared

jackdaws love my oig sphinx of quartz
jackdaws love my big sphinx of quartz

▲ Standard PCW8000 printer

jackdaws love by big sphinx of quartz
jackdaws love by big sphinx of quartz

▲ Amstrad DMP3160

jackdaws love my big sphinx of quartz
jackdaws love my big sphinx of quartz

▲ Panasonic KX-P1081

jackdaws love my big sphinx of quartz
jackdaws love my big sphinx of quartz

▲ Star NL-10

jackdaws love my big sphinx of quartz

▲ Standard PCW9512 ('Prestige 10' wheel)

jackdaws love my big sphinx of quartz

▲ Panasonic KX-P3131 ('Courier 10' wheel)

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▲ Gakken GPR2000 ('Letter Gothic 12' wheel – Courier 10 also supplied)

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HOW TO USE YOUR ED

On your CP/M disc is a complete text editor called ED. 8000 Plus's own editor, who isn't called Ed, explains.

The more you use CP/M the more you will discover the need to create text files. This is particularly true if you start to dabble with programming, since virtually all programming languages work by taking a pre-prepared file of text (ie. the program), processing it and generating an output file.

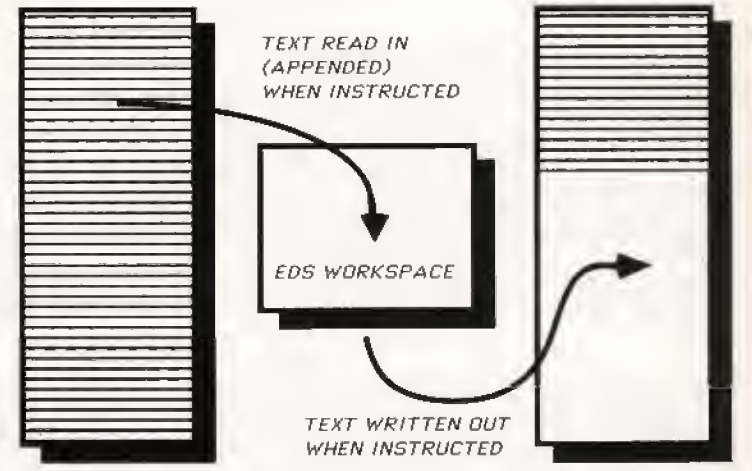
There are several ways of creating text files. You could use LocoScript, you could buy a CP/M text editor such as NewWord or Protext to do the job for you, or you could use the mini-editor RPED that is supplied on the CP/M master discs. These methods all have their drawbacks: it is a real pain constantly swapping between LocoScript and CP/M when you are trying to fine-tune a file using LocoScript as the text editor; NewWord and Protext are ideal for CP/M text file creation, but unfortunately cost around £50; RPED is excellent for creating little files (for use with SUBMIT or SETKEYS), but you cannot have more than 200 lines to the file. 200 lines may sound a lot, but when you start programming you will soon realise how little it is.

The answer to all these is to use ED. It is on your master discs in the file ED.COM for free, runs from CP/M and although lacking modern 'user friendliness' can handle files of any size.

```
B)ed keys.ed
NEW FILE
   : *i
1:  72 N "↑'8'"
2:
   : *e

B)setkeys keys.ed

B)
```



In the beginning

To get a feel for creating files with ED, above is a one-line file that will be incredibly useful. With ED as you first run it the delete key will not work – to delete the last character typed you are expected to type [ALT]-H. However, it is easy to use CP/M's SETKEYS program to make the [DEL] key work by making it produce [ALT]-H (ASCII code 8) when pressed.

Take a disc with a few k of free space and make sure you have copied the files SETKEYS.COM and ED.COM onto it from the CP/M main master disc. You're going to create a file called KEYS.ED, so at the A> prompt type

```
ED KEYS.ED
```

and you will see 'NEW FILE' displayed followed by an asterisk, ED's prompt. Now type `i` [RETURN] (for 'insert text' – the `i` should be lower case) and you will see the asterisk vanish to be replaced by '1:', meaning you are now typing in line 1. Type

```
72 N "↑'8'"
```

and press [RETURN]. The up-arrow is [EXTRA]+U. '2:' appears in case you want to insert anything on line 2, but you don't so press [EXIT]. The asterisk prompt reappears to let you know you are in command mode rather than input mode. Whenever you see the asterisk it means that ED is waiting for a command; conversely, if you type a command and nothing happens, check you aren't in input mode.

Now the file is finished. Type `e` for 'exit' and the workspace is now saved to the file KEYS.ED and you are returned to CP/M's A> prompt.

You're ready to use the file now. Type `SETKEYS KEYS.ED` and the [DEL] key will be set up to delete properly from now

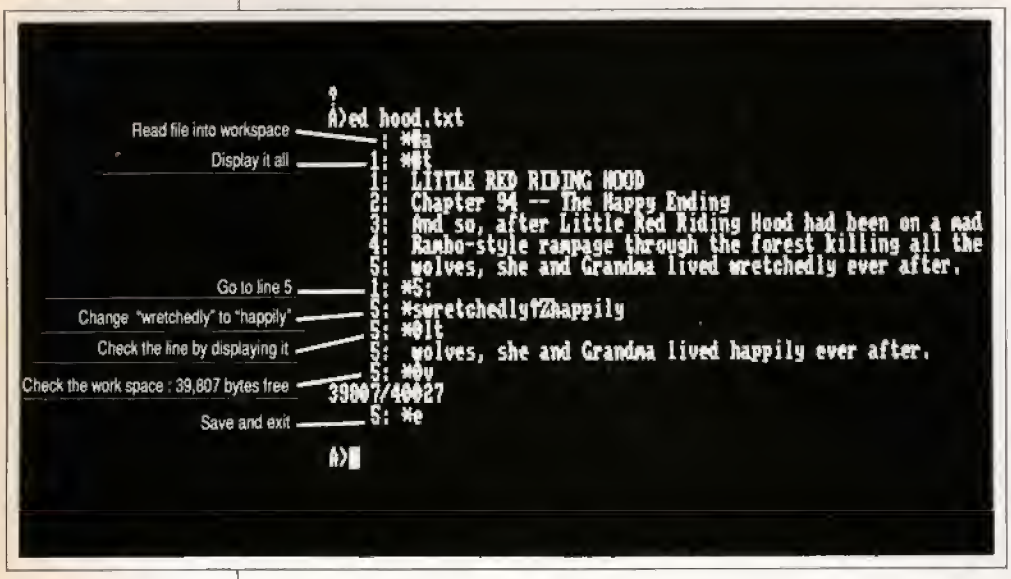
How ED sees files

ED is a real old-fashioned programmer's editor, the kind that you would have used if you worked for IBM 10 years ago, or if you are a university student now.

ED revolves around the idea of the 'input file' (the file you are editing), the 'output file' (the result of editing the input file) and the 'workspace' (the current area of text being worked on). The output file will usually have the same name as the input file. When you start ED going the workspace is empty, and you have to explicitly read in some lines from the input file. After making any changes you want, you then write the changed lines out to the output file.

What this boils down to is that the workspace is the crucial area of ED's operations. Within the workspace, the lines you are currently working on are numbered from 1 upwards, and you can move around inserting, deleting and changing text. ED has an invisible 'workspace pointer' which is a bit like the cursor in LocoScript – it is the last character ED looked at, and so the position where any text to be inserted will be put.

ED isn't a screen editor, so you can't use the cursor keys to move around. To make a change to a line you have to know what number the line is, give an instruction to move the workspace pointer to that line and then make the changes you want. There are also various standard operations like 'Find' and 'Substitute', which will look forwards from the current position for a specified string of characters, and then substitute it for something else.



The full story

ED is really quite complex, and there are more commands than can be covered here. For a full treatment of ED try one of the CP/M books like *The CP/M Plus Handbook*, £14.95, published by Heinemann.

Z cars

'↑Z' is the standard way of writing what is known to CP/M buffs as 'Control-Z'. To type Control-Z hold down [ALT] and then press Z, don't try to type a literal up-arrow symbol.

on. You will have realised that ED is not a word processor for preparing beautiful letters, so you won't find little luxuries such as automatic word-wrapping – you need to press [RETURN] at the end of each line.

Editing existing files

To modify KEYS.ED, at CP/M's prompt just type `ED KEYS.ED`. This will mean the changed file will still be called KEYS.ED (the old version will be stored on disc as KEYS.BAK). If you want, you can tell ED to store the new version under a different name: `ED KEYS.ED KEYS.NEW` will mean the changed file will be called KEYS.NEW, leaving KEYS.ED unchanged.

Either way, ED has now opened KEYS.ED but not read it into the workspace, so at the asterisk prompt you must instruct ED to 'append' the contents of the input file to the workspace. The command for this is `#a`. Now you have the file contents at your mercy in the workspace, and you can start editing.

The basic commands at your disposal are listed in the box. The best way to master them is to create a test file and play around. Get into insert mode (type `i`) and enter a dozen or so random lines, then [EXIT] to get back to command mode. Now try out a few commands.

Pressing `b` takes you to the beginning of the file, then `5t` will type out the next 5 lines. `5:` will take you to line number 5, then `k` will kill that line. The lines are all renumbered automatically, so line 6 now becomes line 5 and so on.

Altering the text in a line is best done with the 'substitute' command, `s`. Suppose the line you are on reads 'and so they all lived wretchedly ever after'. To change 'wretchedly' to 'happily' you would say `swretchedly↑Zhappily`. To insert 'very' before happily, one way is to say `shappily↑Zvery happily`. To delete 'ever' and the subsequent space you could say `sever ↑Z`, ie. substitute nothing in place of 'ever '.

Do a `b` then a `#t` to inspect the changes you have made by typing out the whole file. Finally, type `q` to quit the edit and discard the session, assuming you don't want to save your ramblings. Typing `e` would save all the changes to KEYS.ED and exit normally.

ED can edit files of up to 40k like this. There are ED commands to edit files longer than 40k, but no sane person would be using ED on a file that long anyway. To see how much space you have left type `0v` – a reply like '34768/40027' means you have 34,678 bytes free out of a total of 40,027.

A few hints and warnings

One of the most confusing things about ED for those used to screen editors such as LocoScript is the 'workspace pointer'. Not all the commands actually move the pointer, especially the `t` (type) command. If you are on line 10 and you do a `10t` command, lines 10 to 19 will be printed and you might think that were you to give an insert command the text would go after line 19. Not a bit of it – in fact the pointer is still at line 10 and the text would be inserted there. The commands for finding and substituting text all work forwards from the current position, so you may need to do a `b` to get back to the beginning of the file before 'find'ing text.

Many commands can be prefixed by a number, meaning 'do this for the next however many lines'. For instance, while 'k' kills the current line, '10k' kills the next 10 lines and '-5k' kills the previous 5 lines. The hash sign, #, is the abbreviation for 'a lot' (or 65535 to be exact), so '#t' means type out all lines from here on.

To be safe, always use lower case for the command letters. ED tends to assume that if you type the command in upper case then everything else should be in upper case too. If you use `F` rather than `f` for the 'find' command, your text will be searched for in upper case only.

You can combine several commands on one line for speed. For example, if you were positioned at line 90, to delete line 10 you would do `10:k`, ie. move to line 10 *then* kill it. Make sure you type it right though – `10k` means delete the next 10 lines.

ED is not very forthcoming with its error messages. If you make a mistake it says BREAK '?' or BREAK '#'. This usually means 'no such command', 'no such line', or 'search string not found' or the like.

EXIT

ED's commands at a glance

Basic commands

- `#a` Append all the lines from the input file to the workspace (ie. read the input file)
- `b` Move to the beginning of the workspace
- `-b` Move to the end of the workspace
- `e` Save the workspace in the output file and exit to CP/M
- `i` Insert a line at the workspace pointer position. Get back to the command prompt by [EXIT].
- `nk` Kill (delete) the next n lines
- `[RETURN]` Move to next line and display it
- `-` Move to last line and display it
- `n` Move workspace pointer by n lines (n can be + or -)
- `n:` Move to line n
- `nt` Type out the next n lines starting at the pointer position
- `q` Quit (abandon) the edit
- `itext↑z` Insert 'text' into the current line at the workspace pointer
- `ftext` Find the next occurrence of 'text'
- `soldtext↑znewtext` Substitute 'newtext' for the next occurrence of 'oldtext'
- `rfilename` Read the named file and insert it at the current workspace pointer
- `nwfilename` Write the next n lines out to the named file
- `h` Save and restart editing (you'll need to do a `#a` to read the file in again)
- `-v` Disable the line number display (`v` re-enables it)
- `0v` show free space/total space in bytes

Example command combinations

- `#a#t-bi` Read the whole input file, type it all on the screen then insert text at the end
- `-5110t51` Type out the 5 lines before and after the current line, leaving the pointer where it is.
- `5:i` Move to line 5 and insert text
- `80:10xtemp↑Z10k50:rtemp` Move the 10 lines starting at line 80 to be before line 50 (using the file TEMP.LIB as temporary storage)
- `01t` Display the current line (and move the pointer to the start of the line)

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A RELIGIOUS EXPERIENCE

In which teacher Gwyneth Windsor applies some new technology to the Gospels

Religious Education is perhaps not the first subject anyone would think of when considering a classroom revolution caused by a PCW. My PCW has changed my classroom and the image of the subject I teach, almost overnight.

Six months ago, I was one of those teachers who had never touched a computer. In fact, I was scared stiff of the things. Then my deputy headmaster persuaded me to ask someone for ten minutes tuition on a word processor. Even on an outdated '380Z' computer, that ten minutes changed my life... and that of most of my students. Not only was I completely hooked, but I was also able to see countless ways in which I could begin to develop the use of Information Technology within my classrooms.

It wasn't long until I decided to purchase a PCW 8256 for myself. A PCW was already in use in the school office since some of the administration for the school is already being done on the PCW, so I knew that it had all the necessary qualities. Although primarily a word processor, the graphics were good, there was a printer in the package, it was easy to use, and it was the right price. I was excited by the new possibilities and challenges which it presented.

Happiness on a desktop

My next purchase was a desktop publishing system, and armed with this, I began a revolution. Desktop publishing systems, I am convinced, are a must for any teacher, particularly of humanities, who is prepared to take seriously the challenges of Information Technology. In fact, I'm almost at the stage of wondering how I ever managed without it.

Newsdesk International has proved to be ideal for my needs. I'm very thankful for the luck (or guidance) that led me to it in the first place. My students (aged 11-16) have found it very easy to use, and it makes R.E classes quite an attraction, even to those adolescent pupils who would die rather than admit that R.E could be interesting.

Groups of children regularly work together on the production of the front page of the *Bethlehem Star*, or the *Orient Express*. The results have been exciting, original and entertaining. Pupils come up to me as I walk around the school saying, "Miss, can I come in at lunchtime to do some extra R.E on the computer?" And my reply is usually, "I can't fit you in on the computer today, but you can come and prepare what you want to do, and use the computer tomorrow." It has been miraculous. R.E. increased in popularity overnight, and pupils stopped seeing it as an outmoded subject. They began to be excited by the things which they were doing in R.E.

My pupils have been fascinated by different font styles. Usually, they try out 'Old Font' first. The new font file, with its Celtic characters is also popular, and 'Chunky' has been very useful for title pages. They love writing things in columns, and thoroughly enjoy moving things around the screen. Experimenting with graphics is a favourite, and the 'fill' function has caused many hours of enjoyment. Children have found it satisfying to be able to mix text and graphics. It seems like magic to them, to be able to introduce a picture from the snip art file, and to watch it grow at the touch of a key, and to use it to enhance their written work. They have also managed to learn quite a lot of R.E! It has become a splendid way of dealing with some of those children who are usually less motivated.

Less able pupils have particularly benefitted through using the computer, since the PCW solves handwriting and spelling problems. They can see at once how attractive their work looks. They immediately feel happier with it, and are much more enthusiastic, because they know that they have achieved something good. There is an inbuilt satisfaction in a nicely presented piece of work that the pupil can show to anyone and not feel embarrassed or ashamed about. In fact, pupils are usually so thrilled with what they have produced that they want to show everyone. The average R.E. exercise book has never been known to be handed round in the same way!

Examining all the issues

One of the thrilling things about the new GCSE exams is the fact that

The acid test

I was concerned to find out whether the use of more interesting presentation made any difference to the children's work. In the same class of 13 year old pupils, I produced two different sets of worksheets. Each had exactly the same questions. One set, however, was simply produced on Locoscript. The other was designed with an interesting layout, using Newsdesk. Pupils who worked with the carefully designed layout, incorporating different fonts, windows and graphics, on the average scored 5 marks higher than those whose work was given to them in a more traditional manner. This, to me, was a great incentive to try and get the best from my students by putting into my preparation, that little bit extra offered by the use of a Desk Top Publishing System.

students can present course work in a wide variety of formats. Of course, this opens up some very interesting possibilities, and it is really terrific to be able to suggest that students present their coursework written on LocoScript, or in a more interesting way using the Desk Top Publishing System adding graphics where appropriate.

One group of 14 year old students planned a survey, and wrote the questionnaire on LocoScript. They then printed the required number of copies, and conducted the survey. DR Graph seemed an appropriate tool for dealing with the format – pie charts and histograms have become a straightforward way of dealing with data, and helping students to see the relevance of R.E. to their everyday life.

The same group of students planned a series of questions which both helped them research and tested their knowledge of Baptism. They stored these on LocoScript, and added to the questions as new ideas came up. After printing these, students then researched and answered questions which they themselves had worked out, formalised and printed. This made them far keener to work on the finished assessment. By the time that they came to answer the questions, they had done so much research, and were so familiar with the ideas involved, that they had little trouble in working out the answers and evaluating the fairly complex ideas involved.

Bible on the box

A video digitiser was my next large purchase. The pupils were thrilled. They find it fascinating to select pictures from the videos which they watch as part of their coursework, and to actually be able to see them captured on the computer, and printed. Pictures reprinted from the video via the digitiser make a tremendous difference, both to the filling in of a questionnaire and also to the content of the educational video itself.

My PCW has also been marvellous in the production of more interesting worksheets for children to use. In these days of educational cuts, few of us can afford sets of text books. They also go out of date fairly rapidly, both in terms of information, and also in style of presentation. Most secondary school teachers spend vast amounts of time on the production of interesting worksheets/information sheets for their students. Here again, the desktop publishing system comes into its own. Using DTP plus digitiser, worksheets which look both interesting and very professional can be produced at fairly low cost. They can be stored on disc and extra copies produced quickly and simply. Another major advantage lies in being able to produce rapid updates when data changes.

For Humanities' sake

It would be possible to argue that one computer in a classroom is not enough. I find that even having the one my classes are organised into a number of groups, each working in a different way. One of these groups will be working on the PCW. Because it is so straightforward to use, valuable subject-specific work can be produced from the very first time that students use the machine. It is thrilling to see how quickly they grasp how to use the various programs. They only need to be shown once, and they are able to produce work of a very high quality. It raises their expectations of what they are able to do. They expect the work to be perfect, and consequently the standard is higher, of content, as well as format.

In some ways, the most exciting change has been in the level of motivation of many of the pupils. Having once

started to experiment with the use of a PCW, I can see so many ways in which I can use it. All I lack is time! When I can afford it, my next purchase is going to be a MasterScan scanner... I can already think of dozens of ways to use it in my classroom.

Once my Headmaster saw the difference that my own PCW was making in my classroom, and the interesting work being produced in R.E., he was very quick to offer to purchase an official one for the department. He was sure that it was going to be money well spent. We looked at the other possibilities open to us, within a certain budget, but came back to the PCW8256 because we couldn't find anything to better it for use in a Humanities class. The peripherals are easily available and inexpensive, and the students can use it without much instruction. It meets our needs better than anything else.

Each time a child uses a computer effectively in a classroom situation, it is an advertisement for that machine. If the machine is readily available and recognisable in the local stores where children shop with their parents – as the PCW certainly is – it can influence what mums and dads buy. Manufacturers, therefore, please take note: educational discounts would be helpful, and ultimately increase sales.

My final plea is to those who have responsibilities for finance. Don't be scared to spend money on a PCW for an R.E. department. The uses of a computer in a Humanities subject are infinite.

EXIT

Are you a case?

Has your PCW revolutionised your life? Traumatised it? 'Case in Point' is a regular feature of 8000 Plus and we are looking for readers with interesting experiences to relate. If you use your PCW for something more than just LocoScript, why not share your thoughts with a waiting world?

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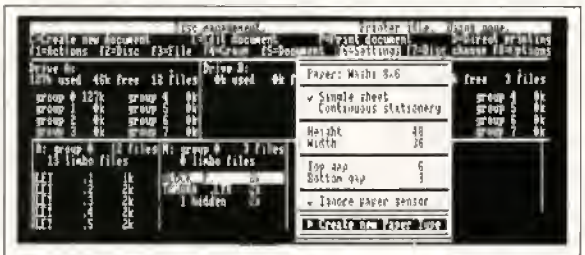
LAYOUT RULES OK

Rob Ainsley sizes up a few documents in LocoScript 2

The sort of paper you use for your letters depends on what sort of letter you want to send. Business correspondence will probably go out on bog-standard headed A4; but your love letters would look more romantic on that scented, odd-sized, sideways hand-made Japanese washi you picked up in Kyoto. With LocoScript, you're in luck; far better and more easily than most word processors, you can set up your layouts and paper types to cope with any piece of paper you throw at it.

First, suppose you're wanting to set up a disc to hold some business letters. In group 0 on your blank disc, hit C for 'create' a document, calling it TEMPLATE.STD. As you know, when you create any new document in a group, LocoScript will take the group's TEMPLATE.STD and use it as a starting point for your new document. So, if you create a TEMPLATE.STD consisting of a heading with your company name and address, every document you ever create in that group afterwards will have the heading automatically included in it.



▲ setting up paper type menu for 8x6 notelet

The first thing to do in the new template is to set up the layout. On the 'f2=Layout' menu choose the 'Change layout' option. The cursor now moves up into the ruler line at the top of the text area; here you can set things like tab positions and left and right margins.

Knowing where to set the margins is a big step to conquering your paper problems. Take a blank sheet of the paper you want to use, and with a pen mark out the actual area that you want the text to fall in. Now, in LocoScript 2 on the PCW8256 and 8512 you are probably using 12-pitch text, but on the 9512 the standard is 10-pitch.

Now you can work out where the margins should be. Suppose your paper is A4, which is 8¼" across, and you want to leave a 1½" margin left and right. This means a left margin at 1½", and a right margin at 6¾". The margins in LocoScript are measured by character position (15 spaces in, 20 spaces in etc) so you have to convert inches to characters, which depends on the character pitch you are using. In this case, with 12-pitch text your margins would be at 18 and 81, and with 10 pitch text at 15 and 68 (to the nearest whole number).

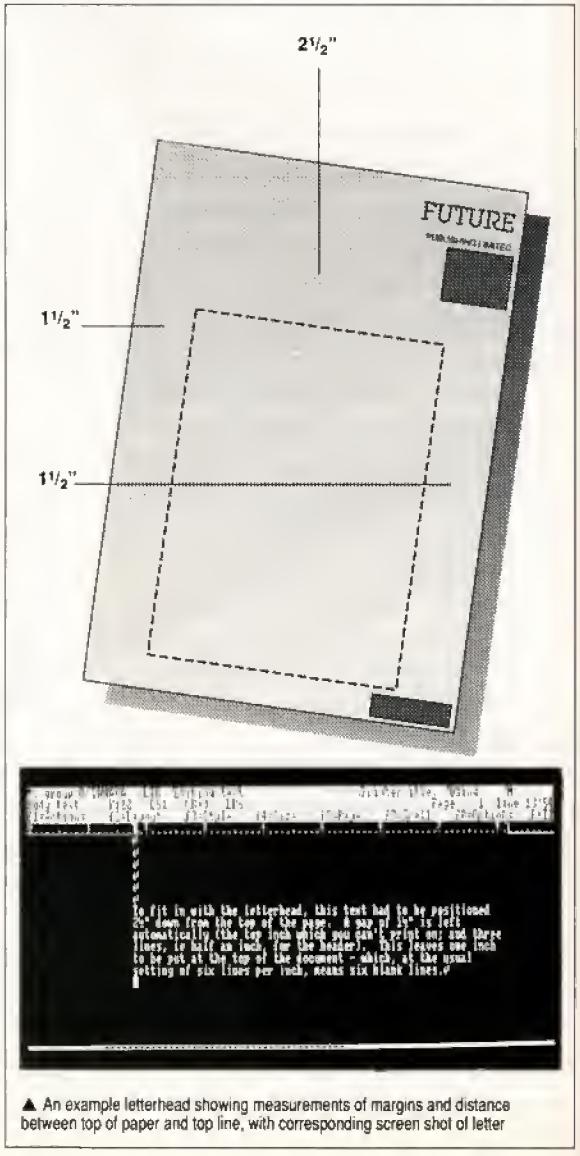
One caveat applies for Loco 2 users – when you are in the editing layout stage the 'f8=Options' menu allows you to alter the 'scale pitch'. Make sure that the scale pitch is set to be the same pitch as your main text, usually 12-pitch on an 8000, 10-pitch on a 9512.

Give them an inch

Your Japanese notelets may not be anything like the standard sizes (as discussed in the box). Fortunately though you can define a new size as standard.

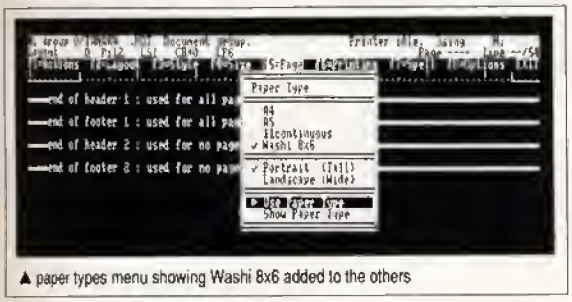
Suppose the paper is eight inches long by six wide. In the Disc Manager screen (ie. not editing any document) select 'f6=Settings', then the 'New Paper Type' option, and a list of data appears. The figures shown are taken from a paper type currently floating about, and you can revise them appropriately. First, choose a name, say 'Washi 8x6'. Indicate whether single or continuous stationery, and key in the height and width of the paper – each figure is specified in lines rather than inches, so since there are six lines per inch as standard, you need to multiply the height and width in inches by six, so for this example the height would be 48 and the width 36.

If continuous paper has been selected, you can set the 'left offset' – how much space to leave in the left margin, again width-in-inches-times-six – and change the top and



▲ An example letterhead showing measurements of margins and distance between top of paper and top line, with corresponding screen shot of letter

bottom gap. On single sheet, the top inch and bottom half-inch (ie. top six and bottom three lines) are physically unable to printed on, but with continuous paper you can utilise this space for printing, though gaps of zero would risk printing on the perforations.

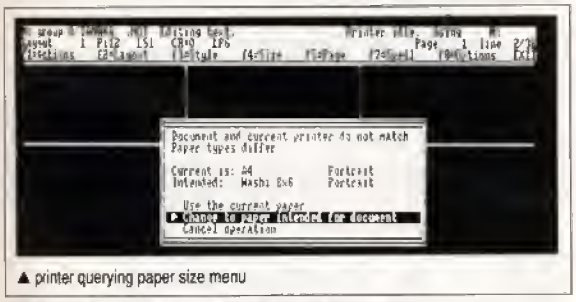


▲ paper types menu showing Washi 8x6 added to the others

Press [ENTER] to 'create' the new paper type. The new paper type has to be stored to disc, otherwise it will be forgotten when you turn off, but this is effectively done automatically since when you leave the Settings menu you're are asked to put your Start-of-day disc in the drive for the new settings to be saved onto.

You will now probably want to set up the document in question to use this 'Washi 8x6' paper too. Edit the document, go into the Document Setup area and go to the 'f5=Page' menu. The 'Paper Type' option then gives you the choice of types, and you'll see the paper just created on the list of available types, so select it. Exit back to the main editing text screen, and you'll see that the page breaks are in the correct places for your new stationery.

You don't in fact need to explicitly alter the paper size that the printer is set up for, since as soon as you try to print your letter set up on washi LocoScript will point out that the printer is currently set up for A4 and ask you whether you wish to use A4 or Washi 8x6. You can just pick the 'Use



▲ printer querying paper size menu

paper type for document' option when the printer query is reported, and from then on the printer expects your own washi. You can make Washi 8x6 the default paper type (ie. the type always expects whenever you use the PCW) by declaring it as the default in the 'Printer Defaults' option of the 'f6=Settings' menu on the Disc Manager Screen.

All that remains to do now is to set your margins in the template, and you can use that group for all your notelets; each new document will be set up on the right size paper, with the right margins.

Stock answers

Suppose you are typing away, and halfway down the first page there are some columns of figures to be laid out. The layout has to be different for this bit, with some decimal tabs and narrower margins.

Press [f2] and select 'new layout'. Set up your new margins, tabs etc., to suit the columns you want, and when you're satisfied [EXIT] and type in the figures.

Suppose you want to switch between the original layout and the 'figures' layout constantly. You can get back to the original by keying in [+]LT1 (LocoScript2 thinks of the original layout as 'Layout 1' of ten 'stock layouts' which you can define to use whenever you want – at the moment you've only defined this one). To get the 'figures' layout again, you can just insert the `{LayouT}` code which appeared at the beginning of the 'figures' layout – either use the [COPY] and [PASTE] keys to copy the layout code, or remember what number the layout was in the list of stock layouts and use the [f2] menu to inser that layout number where you want.

Hit [f1] and select the 'document setup' option. Select [f2], Layout, and choose 'change stock layouts'; a list of ten layouts appears. Selecting one of these by cursoring over it and [ENTER]ing, you can set tabs, margins, select pitch size and justification, etc. – [EXIT] takes you back to the list.

Size isn't important

LocoScript initially expects everything to be on A4 paper, and you could therefore go through life happily sticking exclusively to A4 and never worrying about anything else. But what about your odd-sized notelets? Well, in LocoScript 2 you can specify as part of the document what size paper the result is intended to be on. Also, the printer (independently) expects to be printing out in a certain size, so it knows where to put the page breaks. You can set either to expect A4, A5 (normally or sideways) or 11 inch continuous paper.

If the two sizes are different, you're offered a choice at the printing stage to use the paper the printer expects ('use current paper'). You might use this for drafts – you might have several different paper type documents but want a quick draft of each on continuous paper. Alternatively you could override the printer and tell it to accept the size intended for the document ('change to paper intended for document').

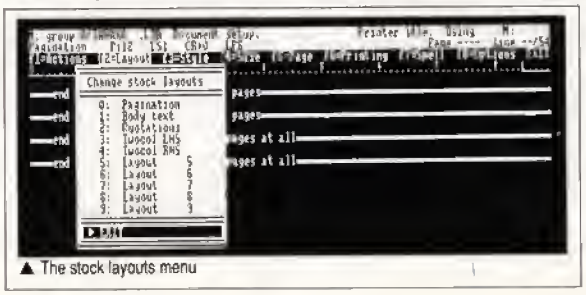
The PCW can cope straight off with the everyday sizes mentioned above. To set up a document as A5 sideways ('landscape' – the normal way around is called 'portrait') for example, you would go via 'f1=Options' through 'document setup' and then via 'f5=Pages' to 'paper types'. You can select A5 and landscape by setting with the [+] key. Appropriate [EXIT]s and [ENTER]s take you back to editing the document.

To set up the printer to expect this size, hit the [PTR] key and via [f3] select the paper type you require. [ENTER] and [EXIT] takes you back to the disc manager.

LocoScript normally uses Layout 0 in the headers and footers, and Layout 1 in the body of the document. You can name each layout ('figures', 'body', 'footnotes' and so on) if you wish via 'f7=Name'; when you've set up as many as you think you'll need you can EXIT back to the headers and footers.

In a document you can insert these layouts by going through the 'copy stock layout' routine ([f2], 'New Layout', then [f5], and select which layout you want to use). However, short-cut commands with the [+] key like [+]LT5 (which invokes layout 5) and [+]LT1 (to return to the original layout) can be used instead. Note this is different to LocoScript 1, if you are a recent convert, where you typed [-]LT to return to the basic layout. The name of the current layout being used is displayed in the top left-hand corner; unless you've given a layout a name, it'll be called something prosaic like 'Layout 1'. If you change the layout through [f2], without going into document setup, LocoScript thinks of this as a temporary change, and the name doesn't change.

The stock layouts only apply to a single document – but if you know you'll be using the same layouts in lots of different documents, define the stock layouts in your TEMPLATE.STD – then in any new documents in that group you can select any of these layouts just by [+]LT3 or whatever. EXIT



▲ The stock layouts menu

For lazy types

The smart way to set tabs without using menus is to press the [+] key – once for a normal tab, twice for a right tab, three times for a centre and four for a decimal.

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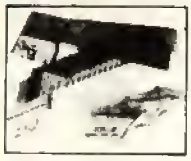

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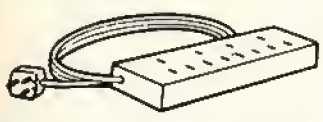

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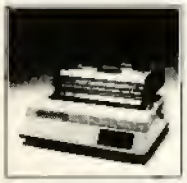

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ACCOUNTING FOR TASTE

Are you using your PCW to run a small business? Adrian Wilkins looks at the best accounting packages.

Any accountant or consultant dealing with small businesses will tell you the same tale. He probably has a multitude of clients whose financial affairs are in a mess. Invoices and receipts thrown into a shoe-box or carrier bag for the accountant to sort out at the end of the year, bills going unpaid because they had been forgotten, debts remaining uncollected for the same reason, and worse. No wonder then that the advent of cheap business computers and inexpensive accounts software packages have found a ready market.

But this is not the whole story. There are also countless clients who have the computers and who have bought an accounts package, but are still in a mess – the receipts still go into the carrier bag while the computer gathers dust on some remote shelf. You wonder why? Read on to find out.

Why computerise your accounts?

If you think that having your accounts on computer will allow you to dispense with your accountant, think again. You will still require his services, for auditing if you are a limited company, or for personal tax if you are self-employed or a partner. However you will be able to reduce your accountant's bills by removing much of the routine drudgery from his task.

The main objective of putting your accounts on to computer has to be so that you can control your business more intelligently. For instance it is possible to be making a fantastic profit and yet have no money in the bank. Alternatively you might be awash with funds but at the same time totally insolvent and about to go into receivership. An unexpected bill comes in – where do we get the cash to pay it? Which customers owe us money and for how long? Can the business really afford that new van? How much should I be offsetting for payment of tax? How much is my business worth? These are all questions which an accounting system can help answer. Many businessmen believe that profit and loss figures should be available for scrutiny at least monthly, if not weekly.

Of course the computer can only do this for you if you are organised about your financial dealings – it is not a panacea for sloppiness. Ideally the accounts should be updated daily, but once a week will normally suffice.

Do you need an accounts program?

What is the difference between a computerised book-keeping package and a full accounts system?

The is no absolute definition of either. A book-keeping package tends to reproduce a manual cash-book, and facilities for keeping tabs on debtors and creditors are usually rudimentary. However it should work out your VAT payments, and most are able to produce a profit and loss position on demand.

An Accounting package will normally provide three ledgers – the nominal (or general ledger), plus a sales ledger for controlling debtors and a purchase ledger for creditors. There is no point in buying a single-entry system; double-entry is simple with a computer, and usually invisible to the user, so don't be put off by the jargon. It permits a full trading account, profit and loss position, and balance sheet to be produced. Many such systems also offer some form of stock control and direct invoicing (with Sage this is sold as 'Accounts Plus' which costs £149.50)

All the packages reviewed here are sold as professional accounting systems. They do not handle personal finances or tax.

Most businessmen are busy. They are probably not computer whizz-kids, and that they are not necessarily familiar with accounting terms. Accordingly, you ought to ask the following questions of any package you may think of buying.

Can you understand the system in general by reading the user manual through once? With the manual to hand, can the system be setup within a couple of hours, in a logical manner? Thereafter how easy and time-consuming is it to use? Can you find your way round the system without the reference book on your lap all the time? How good are the printed reports, and do they give you the required information? Will the system handle a full year's data, to facilitate preparation of one set of accounts? And does it provide an audit trail, so that your accountant can spot any errors and make the necessary corrections?

It will come as a relief to hear that most of the packages reviewed here came out honourably from these searching tests. However, in many cases the user guides were poor – incredibly bad in one instance – and you have to ask the question why some publishers resort to microscopic print. It can cause terminal optic distress and paper and ink costs surely can't be that significant.

Obviously all these packages reviewed are single-user, and this factor limits the PCW as an accounting machine to small businesses, probably from £100,000 to £1 million per year turnover. If you expect to do more than this you are almost certainly going to need a hard disc for faster storing and retrieval of large amounts of data and a faster printer than the PCW provides.

Of course, if you are trying to convert your business from an existing manual accounts system then it's just common sense that you should make very sure to have the computer system mastered before making the final

switch. A period of 'parallel running' is best – use both systems together and check the results match, to give you confidence.

SAGE POPULAR ACCOUNTS

£100.05 ● Sagesoft (091-284 7077)

● All PCWs

The Sage package is reportedly the best seller of them all, with annual sales rumoured to be over £1 million. This is not without reason. The package is simple to install and relatively easy to set up, with a user manual that is both readable and which includes worked examples.

There is complete flexibility over the number of sales, purchase and nominal accounts within the predefined maximum. It uses a single audit trail (which can grow to fill all the free space on the disc) and from which all the daybook, VAT and nominal ledger reports are based. For profit and loss reporting, and balance sheet, the nominal has to be subdivided into trading accounts, assets accounts, etc. This is highly flexible, but can be a little confusing at first (and it is all too easy to achieve a balance sheet that does not balance!), but this is offset by the fact that all the control accounts are preset (Bank, Cash, VAT, Debtors, etc).

Once operational the system is a dream to use. There is no disc swapping, and simple clear menus make it possible for virtually anyone to use, with no accounting knowledge at all. In particular, transactions specifically for cash and cheque postings eliminate the requirement to understand journal debits and credits. The package handles VAT with ease, each posting being either devoid of VAT, net of VAT, or the gross amount – the software calculates the appropriate figure in each case. When setting up opening balances and making journal transactions, the system forces the user to balance the ledger with equal entries elsewhere, thus preserving the double-entry trial balance.

While it generally scores well all round, Sage has a few niggling problems. For instance, the VAT calculation is occasionally 1p out – the VAT rulebook says that any fractional pence amounts are dropped, but Sage rounds to the nearest penny. The package does not easily handle discounts, for prompt payment etc.

The program is heavily overlayed (or 'chained' to use BASIC jargon) which makes it slower than necessary in operation. This can be obviated to a greater extent by preloading all the program files into drive M: – a fact that Sage do not publish. There is an editing routine to correct errors on input, but it is hard to use. An abort command is especially lacking.

There is only one nominal account for 'bank' and thus it is impossible to post cash against the sales or purchase ledgers. The monthly profit and loss report and balance sheet operate by comparing the current nominal ledger account totals with those of one month ago. This means that the user has to perform a regimented month-end routine and use CP/M's PIP, to copy the appropriate files from last month's backup disc to the current data disc. Finally, there is no year-end facility – the user has to reset all the trading and overhead accounts back to zero manually.

Overall though, Sage is probably the best general system there is, covering the majority of functions that a small business would need, in a simple way.

BUSINESS CONTROLLER

£99.95 ● Digita International (0395 45059)

● All PCWs

Top of the league of professionally written and easy-to-read manuals! The package too is a delight to use, though it must be stated that it is not a full accounting system.

Business Controller arrives with a nominal ledger already set up which will cater for most businesses, and with a small tutorial provided you can be up and running literally within minutes.

One novel feature is the inclusion of a report of financial ratios, such as liquidity ratio, sales turnover to working capital, etc. Normally these figures must be calculated from the accounts, and they can be useful to gauge the performance and health of a business. However it has to be said that such parameters are of more use to a large limited company or plc (indeed the stock market is obsessed with such figures) and not many publicly quoted companies will be keeping their books on a PCW.

Business Controller allows the concept of debtors and creditors but does not include provision for separate sales and purchase ledgers with individual accounts for each customer and supplier. It follows that you cannot produce an aged debtor/creditor list.

More of a problem for the not-so-tiny business is the way VAT is handled, or to be precise not handled. If you are posting a cash transaction then you have to enter two separate sales lines, one for the nett amount and a second for the VAT (which you must extract manually beforehand). This makes it so cumbersome that it virtually excludes the package for use by VAT-registered businesses.

However, if you are not VAT registered, or if you are a retailer whose VAT is calculated in one lump sum at the end of a VAT quarter, then the Digita package does offer good value.

The right computer

If you go into a businessy-type computer shop and ask about what hardware and software you need, you may well come up against the business dealer's inherent bias towards IBM PCs. You will be told that the PCW is 'not powerful enough' – which usually means that the salesman hasn't understood what you want to do or that he gets a bigger mark-up selling PCs than PCWs.

So are PCWs powerful enough for the job? The answer is a categoric "Yes". The PCWs, despite being marketed by Amstrad as word processors, are powerful business machines in the micro scene and for accounting functions every bit as capable as their big brothers the PC1512 and 1640. Indeed, compared to a simple PC with no hard disc they are approximately as fast in operation.

Accounting programs tend to be quite large, and you will probably generate a fair bit of data over a year. The 8512 is the best machine for running accounts on, since this has two disc drives (you can keep the program disc in one drive and data disc in the other). The new PCW9512 will also do since its single disc drive is a large-capacity drive (720k) and you'll usually be able to fit everything on to one disc. However, you will probably find the 8000-series dot matrix print more suitable for accounts than the 9512's daisywheel, since many programs format the pages to highlight important results by using condensed print, ruled lines, italic text and so on.

It has to be said that the increasing popularity of the PCs has resulted in many of the software houses applying less of their development effort to the PCW market and in some cases this means that the best new accounting packages are not going to be released for the PCW.

The programs reviewed here were all tested on an 8512, although they will work on any PCW.

Sage on the 9512

Sage Accounts is slightly problematic if you have a PCW9512. All its output is in condensed type (17 pitch), which is illegible with a standard daisywheel. You can get by if you use the 'Mini Gothic' alternative print wheel, which is at least designed for 15 pitch work.

SAGE POPULAR ACCOUNTS

RANGE OF FEATURES	■■■■■	PERFORMANCE	■■■■■
EASE OF USE	■■■■■	DOCUMENTATION	■■■■■

8000 PLUS VALUE VERDICT ■■■■■

DIGITA BUSINESS CONTROLLER

RANGE OF FEATURES	■■■■■	PERFORMANCE	■■■■■
EASE OF USE	■■■■■	DOCUMENTATION	■■■■■

8000 PLUS VALUE VERDICT ■■■■■

BATH GHOST-BUSTERS LTD — Balance Sheet — Date : 16/11/87

	This Month		Year to Date	
Fixed Assets				
No 10 Ghost Busting Kit	193.20		1,612.26	
Vehicles			1,612.50	
Ectoplasm Generator	37.50		37.50	
	230.70		3,262.26	
		230.70		3,262.26
Current Assets				
Debtors	1,155.10		1,452.05	
Petty Cash	255.18		(46.60)	
Bank	(2,351.34)		1,211.14	
Stocks			866.00	
Interest Account			5,000.00	
	941.06		8,483.59	
Current Liabilities				
Creditors	(674.54)		2,721.36	
PAYE and NI reserve	(12.88)		20.58	
V.A.T.	(707.62)		88.86	
Accruals	25.75		1,940.10	
	1,269.29		4,770.90	
Nett Current Assets		328.23		3,712.69
		558.93		6,974.95
Financed By :				
Capital Introduced	37.50		2,187.50	
Personal Loans			1,000.00	
Retained Profits	(305.55)		960.47	
Tax reserves			2,000.00	
Nett Profit/Loss	826.98		826.98	
	558.93		6,974.95	
		558.93		6,974.95

▲ How an accounts package presents the results to you – this one is a balance sheet for a company's first year's trading, from Sage Accounts. The 'net worth' of the business is £6974, but in practice the 'good-will' value built up over a year makes the true value higher than the raw account indicate.

BATH GHOST-BUSTERS LTD — AGED DEBTORS ANALYSIS — Balances as at :16/11/87 — Page : 1

A/C	ACCOUNT DESCRIPTION	CURRENT	1 MONTH	2 MONTHS	3 MONTHS	OLDER	BALANCE
110	Wessex Spooks Plc	46.00	0.00	0.00	0.00	0.00	46.00
135	Rent-a-ghost Ltd	1,029.14	0.00	0.00	0.00	0.00	1,029.14
200	Poltergeists Internatl.	79.96	0.00	269.35	0.00	27.60	376.91
		1,155.10	0.00	269.35	0.00	27.60	1,452.05

▲ Aged debtors listing from Sage Accounts for 'Bath Ghostbusters', to whom a total of £1452.05 is owed. While 'Rent-a-Ghost' owes the most, this is a current-month debt. 'Poltergeists International' have debts going back two months and older.

CAMSOFT PSIL

£149.95 ● Cambrian Software (0766 831878) ● All PCWs

You could write a PhD thesis on what goes on in the minds of some software designers. Here ostensibly is an accounts package with some new ideas, but spoiled in its implementation.

The manual seems to have been put together in random order – not in the sequence you require to set up the system. Accordingly you think you have set it up, only to find half way through a transaction that it will not proceed because there was something missed out. This happens over and over again.

The screen menus – dozens of them – are daunting and devoid of any methodology. Once into a transaction the user is presented with unhelpful prompts – for which you need the manual as reference as there is no on-screen help. A most infuriating aspect is the continuous stream of "Do you want to continue? Y/N" prompts that appear every few seconds.

The bonus points that Camsoft does pick up are as follows: there is a facility to mark debts as "disputed" – in which case they are reported separately. The nominal ledger is structured into summary groups by virtue of their account code, for example SALHW (Sales Hardware), SALSW (Sales Software) and SALCS (Sales Consumables) are all grouped as Sales in the section entitled SAL. Finally, the nominal ledger may also be analysed from the aspect of 'cost-centres', for example if a business runs three offices in London, Cardiff and Nottingham then costs and profits can be attributed to each.

However, it has to be said that overall this package is definitely not user-friendly.

COMPACT ACCOUNTS

£199.99 ● Compact Software (0703 611214) ● All PCWs

This has to be the biggest of the packages reviewed – it is supplied on six discs! It follows that you are going to need as many backup discs, and that disc-swapping is going to be tiresome when swapping between ledgers. The manual is heavyweight also, running to over 350 pages. Setting the system up is daunting but in fact straightforward.

The concepts behind the system are firmly rooted in 'the old school' of batch processing, and the user must have a reasonable accounting knowledge to get very far. It has to be said that this is not an appropriate package for the PCW market, bristling with facilities on the one hand that a small-businessman could rarely use (such as prepayments, accruals and standing journals) and yet lacking in some fundamental basics.

On the plus side, Compact offers machine cheque printing, integrated nominal ledger, or stand-alone sales and purchases. The package offers a choice of bank accounts, useful for cash traders who wish to distinguish cash takings from banked receipts, and it also handles multi-company accounts.

On the minus side, it is hard work. Entering a sales or purchase invoice, for instance, requires the user to input the nett figure, then the VAT amount, then the gross figure, and finally a batch total. This is a puzzle to anybody who thought computers were there to help in calculations not just to check that its human operator can add-up!

The VAT reports are firmly wedded to the monthly cleardown process, and late invoices cannot be handled with their correct tax point. All postings to the nominal ledger must be entered as discrete debits and credits, and there is no automatic double-entry cash or cheque entry.

Compact is an accounting system system specified by accountants and written for accountants. If you are not one it is probably not for you.

COMPACT ACCOUNTS

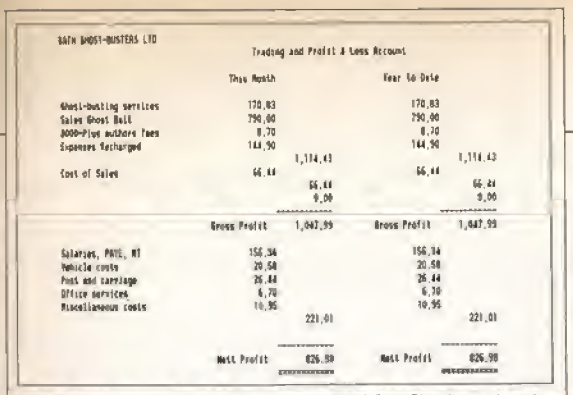
RANGE OF FEATURES	■■■■■	PERFORMANCE	■■■■■
EASE OF USE	■■■■■	DOCUMENTATION	■■■■■

8000 PLUS VALUE VERDICT ■■■■■

CAMSOFT PSIL

RANGE OF FEATURES	■■■■■	PERFORMANCE	■■■■■
EASE OF USE	■■■■■	DOCUMENTATION	■■■■■

8000 PLUS VALUE VERDICT ■■■■■



BATH GHOST-BUSTERS LTD

Trading and Profit & Loss Account

	This Month		Year to Date	
Ghost-busting services	170.83		170.83	
Sales Ghost Bait	790.00		790.00	
8000-Plus authors fees	8.70		8.70	
Expenses Recharged	144.90		144.90	
		1,114.43		1,114.43
Cost of Sales	66.44		66.44	
		66.44		66.44
		0.00		0.00
Gross Profit		1,047.99	Gross Profit	1,047.99
Salaries, PAYE, NI	156.34		156.34	
Vehicle costs	20.58		20.58	
Post and carriage	26.44		26.44	
Office services	6.70		6.70	
Miscellaneous costs	10.95		10.95	
		221.01		221.01
Nett Profit		826.98	Nett Profit	826.98

▲ Profit and Loss report for the first month's trading of 'Bath Ghostbusters', again as presented by Sage Accounts. Turnover is £1114.43 this month, gross profit is £1047.99, and after overheads the nett profit is £826.98.

MAP ACCOUNTS

£149.95 ● MAP (061-624 5662) ● All PCWs

As with Compact, the MAP Accounts are also in the heavy brigade, using the older mainframe accounting concepts shoe-horned into a micro. The system comes on four sides of floppy disc which again means disc swapping as you move between ledgers. In addition there is a highly comprehensive stock-control system with the most advanced features of stock valuation based on a rotating stock philosophy, which also embodies assemblies of component parts.

The similarity to Compact extends to the features, such as machine cheque printing and integrated or separate ledgers. It also shares some of Compact's drawbacks – for instance posting directly to the nominal has to be accomplished by multiple single entries.

MAP handles VAT differently to Compact in that it does calculate the VAT element on each sales or purchase invoice – if you specify a VAT code in the range A to F it treats the financial amount as inclusive of VAT and calculates the 3/23 appropriately. If on the other hand you specify the nett figure then VAT codes 1 to 6 permit you to input the actual VAT amount directly.

Again, an accounting package of this scope is probably beyond the requirements of the average small businessman and his PCW, and more suited to company accountants running on a larger set-up.

SIMPLE ACCOUNTS

£49.95 ● Cornix (0462) 682989 ● All PCWs

This is one of the simpler cash-book style programs which allows you to keep track of where the money is going and what debtors and creditors you have (although there is no aged debtors facility). As the name implies the program is simple enough to use and the most recent versions have now the facility to make changes if you make a mistake – perhaps not pleasing the accounting purists who insist on audit trails of all changes but invaluable for the average PCW owner.

Two drawbacks are that it gets very slow to use for complex operations, and that the number of entries allowed in a given period is limited, so you may need to choose your accounting period carefully. However, for a small business where the trader wants to hand over his trading figures in a more ordered manner with not too much fuss and wants an easy method to work out his VAT this is worth a look.

SANDPIPER ACCOUNTS

£149.95 ● Sandpiper Software (0978 355333) ● All PCWs

The dismally thin manual (with not an example in sight) is a portent of things to come. This package is illogically structured, and the format of the nominal ledger is fixed and inflexible. When setting up the sales and purchase ledgers, the user has to guess in advance what the total number of entries will be, and if the business takes off and you hit this maximum then you are stuck.

Jargon Buster

Although you can't learn to be an accountant just by learning what the terms mean, at least you can bluff your way past an accounts package salesman:

The *Nominal Ledger:* a series of accounts where entries are made relating to the expenditure and income of the business. It is subdivided into sections such as trading, overheads, assets, debtors/creditors and capitalisation.

The *Sales Ledger:* a list of all the credit customers, together with details of how much each owes, and from what dates. The total owing from all customers is balanced by the debtors control account in the nominal ledger.

The *Purchase Ledger:* a list of all your suppliers with whom you have a credit account. It shows how much you owe to whom and for how long. It is balanced in the nominal ledger by the creditor's control accounts.

Double entry: In the old days of book-keeping every entry made in one ledger was balanced by an equal and opposite entry in another ledger. Effectively this process of entering everything twice gives a double-check safety net. In computer systems this is often done automatically anyway.

Aged Debtors: nothing to do with pensioners – this is the list of people who owe you money, arranged with the longest standing debts first. Handy if you offer discounts for prompt payment/writs for slow payment.

While the package does offer fairly good invoice discounting facilities, and uses a concept of posting receipts to the oldest invoices outstanding, it suffers from some serious shortcomings. In particular, only one invoice copy is produced from the invoicing routine. There are no audit trail facilities, and requesting a statement print actually clears down all paid transactions – thus you lose the history on all your accounts.

Overall Sandpiper has little to recommend it.

What's the verdict?

If you are a small business, if you are not VAT registered (and don't intend to be), and if most of your trade is for cash, then Digita Business Controller has much to recommend it. It is especially easy to get going for the novice.

On the other hand, if you are VAT registered or handle sales or purchases on credit, then Sage Popular Accounts is undoubtedly the safe bet. It is going to take a day or so to set up properly, but this investment will pay off handsomely as the package is subsequently easy to use and provides most if not all of the required facilities.

The larger packages – MAP and Compact – can't be knocked, but their complexity is more suited to larger companies who almost certainly will not be employing a PCW to run their accounts with. EXIT

MAP ACCOUNTS

RANGE OF FEATURES	■■■■■	PERFORMANCE	■■■■■
EASE OF USE	■■■■■	DOCUMENTATION	■■■■■

8000 PLUS VALUE VERDICT ■■■■■

CORNIX SIMPLE ACCOUNTS

RANGE OF FEATURES	■■■■■	PERFORMANCE	■■■■■
EASE OF USE	■■■■■	DOCUMENTATION	■■■■■

8000 PLUS VALUE VERDICT ■■■■■

SANDPIPER ACCOUNTS

RANGE OF FEATURES	■■■■■	PERFORMANCE	■■■■■
EASE OF USE	■■■■■	DOCUMENTATION	■■■■■

8000 PLUS VALUE VERDICT ■■■■■

● *Adrian Wilkins is a consultant for small businesses and proprietor of Avon Business Computers.*

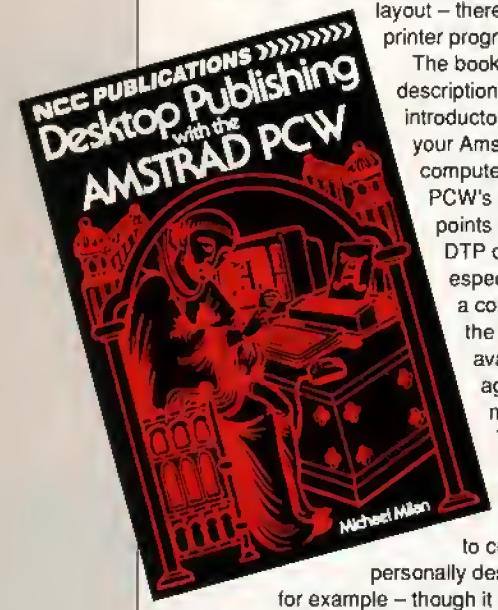
BOOK LOOK

Rob Ainsley leafs through some new books to help desktop publishing fans and programmers.

DESKTOP PUBLISHING WITH THE AMSTRAD PCW by Mike Milan

£9.50 ● NCC (061-228 6333)

Despite the mushrooming interest in desktop publishing there aren't many books around on it. For the PCW specifically, it would seem this is the only available introduction to the DTP on the Amstrads – both the 8000 series and the 9512 are covered – and it's going to be a hard act to follow. The author, Michael Milan, manages to guide you through just about everything you'd want to know about to produce your own publication: word processors, DTP packages, hardware, reproduction methods, page layout – there's even a free headline-printer program thrown in as well!



The book kicks off with a brief description of the PCW itself – an introductory account of where your Amstrad stands in the run of computer things. It also puts the PCW's specifications, good points and bad points, in a DTP context. Another especially welcome section is a comparative rundown of the word processors available for the PCW, again with DTP use very much in mind. Protext, Tasword, NewWord and WordStar are all covered (included is a demonstration of how to create your own, personally designed fonts in Protext, for example – though it fails to mention this only prints out in draft quality). There's also a very useful guide to LocoScript's role in your publication (like designing trim marks – the guide lines for cutting your page up – in the headers and footers).

Relevance graveyard

There are short sections on design and general layout, showing where LocoScript comes into it all. Other manuals have more comprehensive accounts on how your page should be made up – the Desktop Publishing Companion, also reviewed here, is much more technical and relevant to 'real' publishing, for example – but Mr Milan wisely keeps it brief and to the point for PCW users; after all, at the level of most small scale publications, a lot of page layout practice is common sense. He prefers the much more pertinent approach of giving specific, factual information about the materials you would use for pasting up artwork, and about the possibilities and restrictions of the available software and hardware – what you can get out of the various types of printers, for example: dot matrix, daisywheel, inkjet, laser, thermal etc. etc.

Art packages such as DR Graph, Electric Studio's ART, etc., are mentioned, and there's everything you'd need to know about mice, digitisers, photographic screening, and so on. Plus, of course, there's a reasonably detailed comparative review of the four main DTP packages currently available – The Desktop Publisher, Fleet Street Editor Plus, Newsdesk International, and even Stop Press. The author is clearly quite familiar with each package (there are hints on how to recover from a crash in FSE without re-booting, for example).

Only a reproduction

The various methods of reproduction you would use (everything from offset litho to 'Banda'-type spirit duplicating – yes, you can cut Banda masters directly with a PCW printer) are described, though no prices are mentioned, and there are even sections on making transparencies for an overhead projector and getting your text typeset professionally from disc.

In the appendices are a glossary, some suggestions for further reading, and an interesting BASIC listing which defines a very smooth and pleasant looking headline character set for you. It would be an extremely useful addition to anyone's desktop publishing system, though you would need a lot of patience to type in over 700 lines of BASIC!

The only grumbles you can reasonably have about the book are incidental. It is generally well illustrated, though the predilection for the rather bare and over-stylised drawings done with PCW graphics packages may irritate some readers. A few more examples of finished and laid-out newsletter pages – perhaps one for each DTP package – would have been nice too; in a subject so results-oriented as this, the more illustrations the better.

And, DTPers being so money-conscious, it would have been helpful to give at least a rough guide to what things cost. Many people start their DTP with a given (or more often borrowed) amount of money and this determines the hardware, software and method of production they will use.

But apart from that it's a clear, readable, comprehensive and well presented guide to the materials and methods of DTP. For anyone who has a PCW and wants to find out how they can unleash their creative talents on their own desktop publication, this is a must.

DTP with the Amstrad PCW
ISBN 0-85012-636-3
8000 PLUS VALUE VERDICT ■■■■■

Stubble sided disc

Users of *The Desktop Publisher* will be interested in *Designer Stubble*, a newsletter about producing newsletters. It comes as a disc (or set of discs) with Desktop Publisher files you can read on screen or print out. The newsletter itself is a very good example of smart and readable layout and contains a lot of practical information about the process of putting a newsletter together – and illustrates its own points very nicely.

Minority products can never be cheap, by the sheer economics of production, but the price of £16.95 (for two A-drive discs) or £13.50 (for one B-drive disc) is not much more than you'd pay for a book. You have the disadvantage of having to print out pages yourself if you want a hard copy (around four minutes each page at draft quality, ten or more at high quality) but once you do you have an excellent example of a DTP publication to follow – and you have the page files on disc to see how it's all done.

Designer Stubble is produced by John Evans, 20 Grosvenor Place, London Road, Bath BA1 6AX. You can get further information from him on 0225 315131.

MALLARD BASIC INTRODUCTION AND REFERENCE (2nd Edition)

£9.95 ● Locomotive Software (0306 887902)

All PCWs come equipped with the Mallard BASIC programming system, but in their wisdom Amstrad decided not to give owners any instructions on how to use it. Would-be BASIC programmers have to buy the manual from Amstrad as an extra, and until now even those who do often have a struggle, since the tutorial chapters were a bit cursory. Now Locomotive Software – the producers of Mallard BASIC – have come up with a new edition of the manual, which of course applies to 8000 series machines and 9512s.

As in the previous manual, the first part of the book is an introduction to programming in BASIC starting right from scratch, and leading up to writing your own database programs. You don't have to worry if you've no idea what a program looks like or how you'd go about writing one; you're led very gently by the hand right from switching the computer on.

The second part is a comprehensive reference guide of all the BASIC commands, so if your memory fails you you can quickly look up the correct way of using MID$ or ADDREC.

The additions in the new manual are not radical but are very useful. They look to have been put in very much for the benefit of general learner programmers rather than the hacker – for people who want programs they can apply to their business or leisure work.

One of the great strengths of BASIC is the 'Jetsam' system, a powerful set of commands which allow you to store and index information in disc files – in effect, to write your own database program. The new manual has a greatly expanded chapter on creating these files, and has a detailed account of how to write an indexed name-and-address database, with the program fully written out as an example.

The other notable extras are sections on machine code and the 'GSX' graphics system. If you've ever worried about your ignorance of what all this PEEK and POKE business is, here's where to go. It's only intended as a rough guide to what the many letters to magazines telling you how to 'POKE your screen' and 'PEEK at the clock' are about; keen hackers would be advised to look to specialist publications on machine code.

One or two more appendices have been slipped in too – information on floating point arithmetic, the command line editor, trigonometrical functions, and the ASCII character set.

The new manual represents extremely good value for money. Of course there are many other books around on how to program in BASIC, and if you are a total programming neophyte you may do well to have a look at these various 'how-to' publications in the high street shops; they may be stronger on examples and tutorial. Having said which, the new sections in this manual are most welcome, and it is the only comprehensive and definitive guide to Mallard BASIC – as such, an indispensable reference for programmers.

Mallard BASIC Introduction and Reference
ISBN 1-85195-009-5
8000 PLUS VALUE VERDICT ■■■■■

THE DESKTOP PUBLISHING COMPANION by Graham Jones

£14.95 ● Sigma Press (0625 531035)

Many PCW owners are, almost by definition, involved in writing and publishing – hence the popularity of desktop publishing programs such as Fleet Street Editor, The Desktop Publisher, Newsdesk, etc.

The *Desktop Publishing Companion* aims to be a complete guide to the subject, with sound information on everything from page layout to libel laws to distribution. DTP is a jargon ridden game, a world of ems, gutters, bleeds, leadings, RIPs and WOBs; a book like this would be invaluable to the rookie publisher. It's not just a glossary though, the entire process of producing a publication is covered – assembling the hardware, deciding the target market, working out a house style, deciding on a page format, incorporating pictures, working to deadlines, organising advertising and distribution etc.

There's no mention of the PCW in the book, though most of it is so general it applies to any desktop publishing system. The only machine referred to with any regularity is the Apple Macintosh, which is the industry standard 'serious DTP' computer. There are sample grids at the back of the book to show you how a typical page on a newsletter, newspaper, company proposal etc., would be laid out, a glossary, and a brief guide to the hardware

The only grumble you could have is that a few more examples of finished pages would have been nice – what there is (illustrating things like reversed-out blocks, good and bad headline practice, type styles etc.) is infrequent and a bit dull. Somehow having an example headline which says 'This is a headline' isn't particularly inspiring. The book is itself desktop published, though, so there is one example of a finished product.

This is a book about publishing, not about computers. It's a good book, and the content more than makes up for its own unimaginative layout; after all, DTP is not about making every page a work of art, it's about presenting what you have to say in a smart and professional way, quickly and efficiently.

Compared to the other DTP book reviewed this month – *DTP with the Amstrad PCW* – this book suffers by its lack of PCW specificity. It is an interesting read, but not detailed enough for PCW owners.

The Desktop Publishing Companion
ISBN 1-85058-078-2
8000 PLUS VALUE VERDICT ■■■■■

Cracker 2 Turbo

The hi-resolution graphics spreadsheet.

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NewStar's famous graphics spreadsheet for the PCW8256/8512/9512 is now 50% faster.

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PARLEZ VOUS?

BASIC, Pascal, C... Why are there so many programming languages? Is any one language 'the best'?

Programming is an activity that you either love or hate. To many people it is incomprehensible, but to others it is a dangerously addictive drug. You start off tentatively writing a five line program to check your car's MPG figures, but each day a new little frill occurs to you which will make the program *absolutely* perfect. A year and three divorces later and you've got 10,000 lines of program which print out a comparative survey of every car ever built.

Most PCW owners start off using the Mallard BASIC supplied free with the machine, but skimming the adverts and various magazine articles you can't fail to notice that there are half a dozen other languages around, each of which has its band of fanatical adherents. You may pause to wonder whether you are at a disadvantage using faithful old BASIC, and whether your car analysis program would be better serviced if you used another language?

Through the interpreter

There are several reasons why you might want a programming language other than BASIC. First, you may already know another language, perhaps from your job or student days, and so want to use that on the PCW. Second, you may need to make your programs run faster and hope that using another language will speed things up. Third, if you want to sell your programs commercially it looks very tacky to have to tell the customer to load BASIC first and then run your program. It is much better to develop it into a file that can be run directly from CP/M, ie. a .COM file. BASIC can't do this, but compiled programs do run in this stand-alone way. Finally, the maximum size of a BASIC program is around 30k, whereas C and Pascal programs can be much larger, which may be useful to you.

It would be wrong to think that the other languages have more functions than BASIC – it's probably fair to say that anything they can do, BASIC can do (indeed it does some things better, such as filing with Jetsam). It's just that the others would be faster.

Why is this so? It is not because BASIC is inherently slow – there is no reason why it cannot be as fast as any other language – it is just that the Mallard BASIC system is an 'interpreter', whereas Pascal, C and the other famous names are usually 'compilers'. In an interpreter, your program is read one line at a time and converted into machine code as it runs. With a compiler, the whole program is converted into machine code at once, and then run. Interpreters are much easier to write, and tend to be more friendly to the user, whereas compilers are faster.

With an interpreter such as BASIC, you enter a few program lines, type RUN, get an error message, edit one line, re-run things and finally save the debugged version. With a typical compiler you prepare the entire program with a text editor, then you run the compiler over this file. It reports your typing errors (or 'syntax errors'), and you re-edit the program file and and re-compile. Then you run the compiled program from CP/M and try to discover the programming errors (or 'bugs'). You have to re-edit the program text file, re-compile it and re-run it for every mistake, which can be tedious at times. Compiling a long program can take five or ten minutes.

There are a couple of BASIC compilers around, but none of them will run Mallard BASIC programs unchanged, especially if you use the Jetsam commands. Also, because Mallard BASIC is actually a very efficiently written interpreter many BASIC compilers are in fact slower than Mallard itself! If it is speed you want from a language you are best off making the break to Pascal or C.

The main contenders

The two most popular alternatives to BASIC are C and Pascal.

Pascal was designed in 1970 as a teaching language for students at Zurich University. As such, it is a simple language where all the commands are normal words rather than obscure combinations of dollar signs, percent symbols and brackets.

Pascal was intended to force student programmers into 'good' programming practices, and at times it can be a bit constraining. In particular if you have got used to the freedom of being able to say 'GOTO' any line you like in BASIC you will sometimes find yourself having to write 20 lines of Pascal to do the same thing.

C is much more of a hacker's language. It grew up in the mid-1970's and is now a firm favourite in university research departments (as opposed to the teaching departments where Pascal rules). It is harder to learn than Pascal and harder to read, but in general it runs a bit faster. There are usually some extra commands for tweaking parts of the computer and doing low-level operations (accessing particular parts of the computer's memory, like the internal clock – similar to BASIC's PEEK and POKE commands) which Pascal frowns at.

It is probably true to say that the majority of commercial software for the PCW is written in either Pascal or C. Pascal

Entomologist note

Legend has it that in the 1950s a programmer on an ancient computer in America could not understand why her program didn't run. Eventually she traced the error to a dead moth falling into the electronics. Thenceforth program errors were known as 'bugs'.

Who and where

While not a comprehensive list, here are the main suppliers of the languages mentioned in this article. As ever, shop around the mail order advertisers for the best deals.

Owners of unexpanded 8256s may well find themselves cramped for programming space – investing in a DIY M-drive upgrade (around £25) is very worthwhile. All these packages come with a text editor. It's worth asking if the supplier sells tutorial books too, since they will know the book best suited to their software.

Pascal80 (HiSoft, 0525 718181) £39.95. Good standard compiler.

Turbo Pascal (Grey Matter, 0364 53499), £56.35. Lots of advanced features such as indexed file storage and 'overlays' to allow for really big programs.

C (HiSoft, 0525 718181) £39.95. No floating point arithmetic, but generally very efficient and compact.

Mix C (Advantage, 0242 578801), £49.90 with text editor, £29.95 without. The manual includes a C language tutorial. Full-featured and more advanced than HiSoft C.

FORTH (HiSoft, 0525 718181), £19.95

LISP (HiSoft, 0525 718181), £39.95.

Micro Prolog (Logic Programming Associates, 01-871 2016), £74.75.

BCPL (Arnor, 0733 239011), £39.95.

Turbo Modula-2 (Grey Matter, 0364 53499), £63.25.

is easier to learn, C is more flexible. Both are capable of working at high speed and significantly faster than BASIC.

The young pretenders

Pascal and C aren't the only contenders, of course. To name a few other languages out on the PCW there's Modula-2, FORTH, LISP, Prolog, BCPL – and of course the dreaded 'machine code'.

To be honest, these are all languages that you would use on the PCW only if you had learnt them elsewhere. Modula-2 is the the long awaited, soon-to-be-a-major-movie sequel to the blockbuster language Pascal. It claims to combine Pascal's simplicity and clean design with C's power.

LISP and Prolog are both 'artificial intelligence' languages (as featured in last month's 8000 Plus). They are ideal for writing your own expert systems or programs which understand English, but they're definitely not intended for writing bank statement calculators.

Machine code is the simplest (or most complex, depending how you look at it) programming language there is. Computers can only do a few basic operations like addition and subtraction, which they do very fast. The various language compilers take Pascal, C or whatever program text there is and convert it into this machine code.

Writing the parts of a program that need to run really fast as machine code can be useful. Furthermore, writing in machine code is free since all the tools you need are provided on the PCW master discs (RMAC.COM and LINK.COM), but it takes two large books to explain how they work.

Machine code is very unfriendly – if you make a programming error you don't get any 'NEXT missing in line 100' messages, the PCW just crashes.

FORTH is an extremely fast language which is barely more sophisticated than machine code. Apparently it was devised by an American astronomer for controlling radio telescopes with, and all the program examples you see in text books on FORTH get heavily into azimuthal angles and the position of the Pole Star.

Finally, BCPL is a bit of an oddity. It is the precursor of C, and is compact, fast and simple. Its main virtue is that there is a good PCW implementation available from Arnor.

Learning the lingo

Very few programming language packages attempt to teach you how to program – the manuals assume you already have a finished program written and just want to know the details of running the compiler. In general you will need to invest £10 or so in a tutorial book too – go and browse in your nearest bookshop, there are hundreds of good books around.

Also, check that the package you are buying includes a text editor for preparing the program itself. LocoScript is not good enough since it does not run from CP/M. If you want to buy a programmer's text editor, Pocket Protext (£39.95 from Arnor) is highly recommended as inexpensive and very good.

Overall, for the majority of personal applications you will find Mallard BASIC very adequate. If you want to sell programs commercially, or speed is really a problem, then use Pascal or C. If you are a confident programmer who is good with manuals and cryptic error messages, pick C for its flexibility, otherwise stick to Pascal.

Unfortunately there is no simple way to convert your old BASIC listings into Pascal or C, just as there is no automatic way of translating English into, say, Italian or Japanese. You've just got to learn the new language, but it's fun and the benefits can be huge.

EXIT

```
10 PRINT "Starting..."
20 j%=7
30 FOR i=1 TO 30000
40 j%=j%+100
50 j%=j%-100
60 j%=j%*25
70 j%=j%/25
80 NEXT i
90 PRINT "... ending"
100 END
```

▲ A program in Mallard BASIC. This runs in 252 seconds.

Head to Head

Although it is impossible to say how much faster *your* program would run if you re-programmed it in Pascal or C, here is an indication of the speeding up you might expect. These times are optimistic, since the examples only cover simple arithmetic which is where the biggest speed increases show.

```
PROGRAM arithmetic;

VAR i,j : INTEGER;

BEGIN
    WRITELN('Starting...');
    j:=7;
    FOR i:=1 TO 30000 DO
    BEGIN
        j:=j+100;
        j:=j-100;
        j:=j*25;
        j:=j DIV 25;
    END;
    WRITELN('... ending');
END.
```

▲ The same in Pascal. Compiled with HiSoft Pascal, this runs in 35s.

```
main()

{ int i, j;

    printf("Starting...\n");
    j=7;
    for (i=1; i<=30000; ++i)
    {   j=j+100;
        j=j-100;
        j=j*25;
        j=j/25;
    }
    printf("... ending\n");

}
```

▲ And in C. Compiled with HiSoft C, this runs in 31s.

The Best Software from HiSoft

HiSoft has been producing languages and utilities for the popular home computers for the last 8 years and we have a very wide experience in this area. Here is our collection of development tools on a selection of Amstrads; please feel free to ring our friendly sales staff if you want any more information or advice on which language to use. We don't just sell programs, we use them ourselves every day.

FTL Modula-2 interactive compiler/editor	£54.95
FTL Editor Toolkit complete source code	£39.95
FTL Editor Toolkit when bought with compiler	£34.95
HiSoft Pascal80 fast, interactive, GSX graphics	£39.95
HiSoft Devpac80 version 2 full Z80 development	£39.95
HiSoft C integer K&R with GSX graphics	£39.95
Knife Plus full disc recovery and editing	£19.95
Nevada COBOL ideal for learning	£39.95
Nevada FORTRAN close to ANSI-66, easy-to-use	£39.95
ZBASIC interactive compiler. 600 page manual	£69.95
HiSoft LISP Easy-to-use interpreter, many functions	£49.95

FTL Modula-2 small memory compiler	£54.95
FTL Modula-2 large memory with 8087 support	£69.95
FTL Editor Toolkit full source code	£39.95
Knife86 disc sector editor plus many utilities	£29.95
Utah FORTRAN, PILOT, PASCAL each	£19.95
Utah COBOL brand-new extended version	£69.95
ZBASIC interactive compiler. New Version 4!	£69.95
HiSoft Projector Easy-to-use project planner	£99.95
HiSoft Creator Programmer's editor, multi-windows	£29.95

We have been beavering away over the 'summer' months carefully crafting lots of new software products. The results are two new programs for the PCWs (**Knife Plus** and **HiSoft Lisp**) and another two programs (**Projector** and **Creator**) for the PCs. Here are some details:

Knife Plus is the *ultimate* disc recovery system for your PCW computers. How many times have you lost files or complete discs when using Locoscript or CP/M? Or accidentally erased programs? Now there is hope with Knife Plus. Definitely a cut above the rest, Knife Plus includes a full sector editor, sector copier, build-file option, many utilitities and an informative manual. A snip!

HiSoft Lisp is a powerful Lisp interpreter with over 300 functions. Based on Common Lisp with libraries for MacLisp & InterLisp, HiSoft Lisp comes with a fully interactive editor, CP/M file handling, m/c code interface, ring-bound manual and is packaged with an excellent tutorial book by Tony Hasemere with many example programs on disc. HiSoft Lisp is ideal for beginner and expert alike.

HiSoft Projector is an easy-to-use, professional project management package for the PC. Using a unique form of graphical display, Projector allows up to 999 activities onscreen; you can edit the activity dependancies, the timing data, resource utilisation and you can try out many *what-if* scenarios with a variety of powerful algorithms. Histograms, barcharts, schedules, calendars and networks are all printed in a clear, organised way. You'll wonder how you ever did anything without Projector!

HiSoft Creator is a complete, versatile programmer's editor carefully designed for quick-and-easy use. Split-screen editing, macros, full block handling, auto-indenting, large file size, optional word-wrap, command shell, on-line Help etc. all make Creator a joy to use.

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FESTIVE FORTUNES

These two superb Panasonic printers must be won!!!

▲ Panasonic KX-P3131 daisywheel printer – the perfect partner for your PCW8256 or 8512

▲ Panasonic KX-P1081 dot matrix printer – the perfect partner for your PCW9512

As the old saying goes, the other man's PCW is always greener. If you own an 8256 or 8512 then you're probably secretly jealous of these new upstart 9512 owners with their fancy daisywheel printers – being able to print letters in proper typescript and do immaculate final versions of books just to impress publishers. As for you upstart 9512 owners, although you wouldn't admit it to anyone else you may be just a little green about the speed and flexibility that 8256 and 8512 owners have with their dot matrix printers – being able to print graphs, diagrams and quick drafts of long documents.

The answer is simple! If you've got an 8000 series PCW, buy a daisywheel printer. If you've got a 9512, buy a dot matrix. Then you've got the best of both worlds – flexible graphics, speedy drafts and letter quality final versions. Oh, but there's one snag. The deal usually involves around £200 leaving your bank account for sunnier climes in a computer dealer's pocket.

In an unprecedented Christmas and New Year spirit of generosity, 8000 Plus and Panasonic UK bring you the chance to win whichever printer you need to complete your PCW's all-round printing performance. The two prizes will be delivered complete with all the necessary parts to be up and running. All in all, the prizes come to around £500-worth at recommended retail prices.

What you have to do

To win whichever printer you would prefer, all you have to do is solve the word puzzle. Write the solution to each clue in its place, and the highlighted vertical column will spell out an appropriate word or phrase for printer owners in 1988.

Then write the word or phrase you have found on a postcard or the back of a sealed-down envelope, together with your name and address, and also which of the two printers you would like to win. Send your entries post-haste to *Printer Competition, 8000 Plus, 4 Queen Street, Bath BA1 1EJ.* All entries must be received by Friday 29th January 1988, and the winners will be announced in the March issue of 8000 Plus.

The 8000 Plu

Once you've solved the fiendishly difficult printer competition why not fill in time while you wait for your new printer to arrive by taking the 8000 Plus festive test?

Here are 20 questions which represent a searching test of your knowledge, judgement, morals and sense of the absurd about all things Amstrad. It's just for fun to fill up the idle moments on Christmas day during the Queen's speech – please don't send us your answers!

1. What are the exact version numbers of LocoScript as sold with 8000-series PCWs and the new 9512?
a) 1 and 2 b) 1.20 and 2.11
c) 1.20 and 2.00

2. Which of the following languages can LocoScript 2 *not* work in
a) Macedonian b) Ukrainian
c) Icelandic

3. What do you get by adding up all the whole numbers from 1 to 250 inclusive? (Try writing a simple BASIC program to do it.)
a) 31373 b) 31375
c) a headache

4. Which of these is the best way to count the number of words in a LocoScript document?
a) Print it out and cross each one off with a pencil
b) Use LocoSpell to spell check the document and look at the 'total words checked' figure at the end
c) Make each word into a separate document on a single density disc and divide the number of 'disc full' errors by 64

5. Which of these PCW products scheduled for 1987 release missed its first official launch date by the largest amount?
a) LocoScript 2
b) Fleet Street Editor Plus
c) Electromusic Research MIDI Performer

6. In which country is the PCW made?
a) South Korea
b) Japan
c) Taiwan

7. Which of these is not a real company?
a) Wombat Software
b) Crocodile Software
c) Llamasoft

8. Which well-known personality features in the PCW9512 TV adverts?
a) Stanley Unwin
b) Ted Moult
c) Jimmy Savile

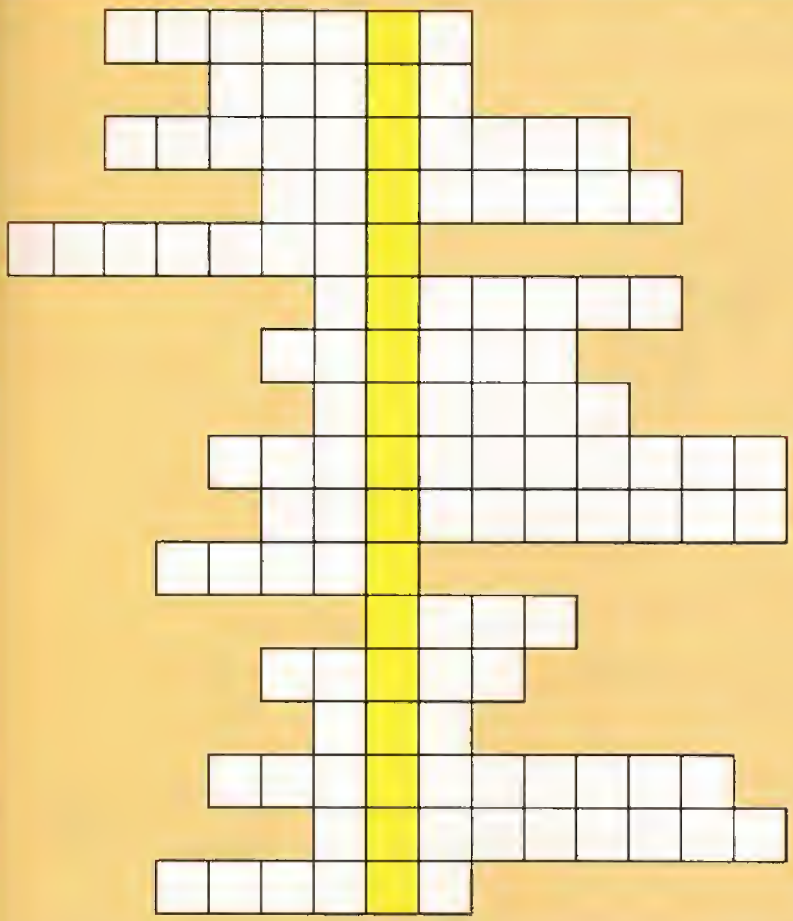
9. What was the name of the show that the PCW9512 was first announced at?
a) the PCW show
b) Comdex
c) Wogan

10. What is the French for 'daisywheel printer'?
a) Le printeur «daisy»
b) L'imprimante marguerite
c) Le traitement de textes integré

11. What is Amstrad's portable computer called?
a) The Joyce b) The Z88
c) The PPC

12. Which of the following is a quote about journalists by Amstrad chairman Alan Sugar?
a) "They are jolly nice people who do a lot to boost our sales"
b) "Many of my best friends are journalists"

COMPETITION!!!



[f8] in LocoScript

How many inches to a disc?

The Panasonic KX-P3131 is this kind of printer

Useful for typing or playing music

A type of program for storing records in

Duck! A familiar kind of BASIC

You need to do this to a new disc before use

What CP/M's 'A>' is

A type of program for adding up figures in

[f1] in LocoScript 1, [f7] in Loco 2 (4,5)

A kind of dance where LocoScript sends its erased files

The PCW's programming language other than BASIC

A popular rodentine add-on for the PCW

Desktop Publishing in brief

What the first P in PIP stands for

The Panasonic KX-P1081 is this kind of printer (3,6)

The main high street retail outlet for Amstrad

s trivia quiz

c) "It's time to make them grovel in print and apologise unreservedly to Amstrad"

13. According to legend, who was the first ever computer programmer?
a) Charles Babbage
b) Ada Lovelace, Lord Byron's daughter
c) Alan Turing

14. How did the original computer program bug get its name?
a) after an insect that the first computer programmers met
b) a nickname for that well loved cartoon character Bugs Bunny who was to early programmers a perfect example of an anarchic trouble maker
c) an acronym for 'booting unambiguous gremlin'

15. CP/M is only one of a number of 'operating systems' for computers. Which of the following is *not* an operating system?
a) MS-DOS b) PC-DOS c) DOM S-DOS

16. How many files can you store in CP/M on a normal A: drive disc in a 8256 and a 9512?
a) 64 and 256 b) 64 and 512
c) 173 and 706

17. Why is a mouse called a mouse?
a) an acronym for Manually Operated Utility Selection Equipment
b) because it looks like a mouse
c) because 'gerbil' would have been silly

18. The LocoScript and CP/M start-of-day discs both have files on them which end in '.EMS'. Does EMS stand for
a) Enigmatic Meaningless Suffix
b) Extra Memory System
c) Early Morning Start

19. How many covers of 8000 Plus (including this month's) have *not* featured a Fruit and Nut bar reference somewhere on the cover?
a) 10 b) 9 c) 13

20. 8000 Plus helped the police recover details of a drug dealer's accounts this summer from which of these packages?
a) Home Finance Package
b) Money Manager Plus
c) Home Smack Manager

How did you score?

Score: (1) a-0 b-2 c-1 (2) a-2 b-0 c-1 (3) a-1 b-2 c-0 (4) a-1 b-2 c-0 (5) a-0 b-1 c-2 (6) a-2 b-0 c-1 (7) a-2 b-1 c-0 (8) a-2 b-0 c-1 (9) a-1 b-2 c-0 (10) a-0 b-2 c-1 (11) a-1 b-0 c-2 (12) a-0 b-1 c-2 (13) a-1 b-2 c-0 (14) a-2 b-1 c-0 (15) a-0 b-1 c-2 (16) a-2 b-1 c-0 (17) a-1 b-2 c-2 (18) a-0 b-1 c-2 (19) a-2 b-0 c-1 (20) a-1 b-2 c-0.
The 'correct' answers are the 2-point scores.

31-40 – You're a very serious-minded person; reading 8000 Plus could be a danger to your health.

21-30 – You were probably trying to give serious answers. That's worrying.

11-20 – If this was the Sixties you would be zany, but in these modern times we'll just call you wacky.

0-10 – Have you ever thought about applying for a job as an 8000 Plus writer?

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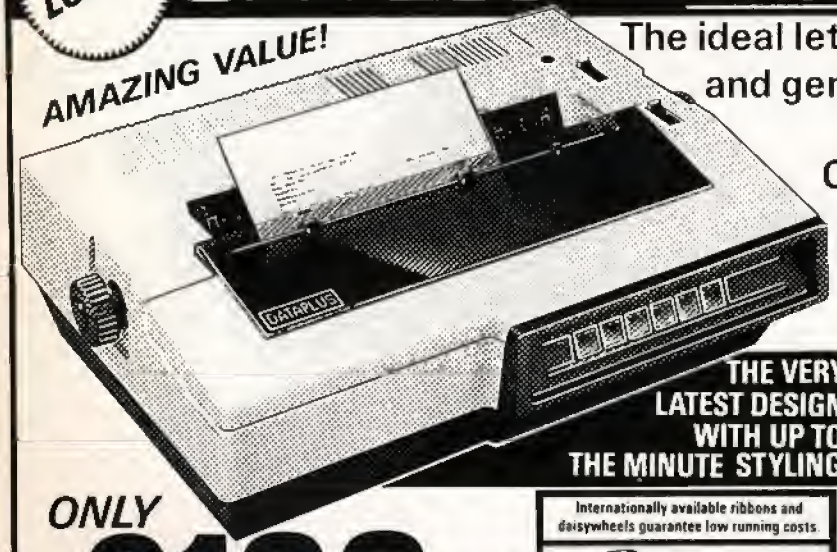

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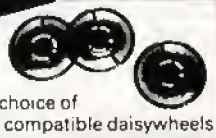

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GET IT TOGETHER

Rob Ainsley continues looking at desktop publishing with a few thoughts on layout style

So you've decided to start your own DTP production. But between having that bright idea for a Parish magazine or club newsletter and getting the printed copies in your hand is a lot of hard work. Even worse, there's a lot of hard thinking to be done.

First, you need to work out the 'look' of the thing. The more columns per page, for example, the more newsy the publication looks; two or three is an ideal balance for most PCW productions between being legible and being newsy.

The title of your publication is obviously important – one- or two-word titles ('Llama Plus') are often snappier than long ones ('Putting Your Llama to Work') and anyway a title longer than one or two words may end up looking cramped. The problem with DTP programs is that none of them have a font smooth enough at very large sizes to use for a headline – you could commission a handmade one from an artistic friend, but your best bet may be to get some Letraset rub-down lettering from your office stationer's and make up the title with that. You can always re-use it next time, of course. A scruffy title is a great way to make a newsletter look cheap and nasty.

It pays to advertise

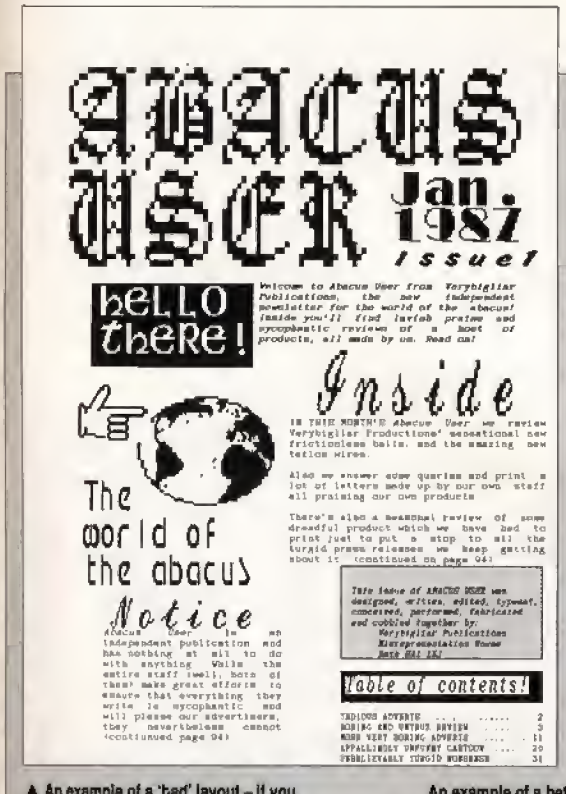
Every publication has to be carefully targetted to its market to succeed, whether financially or otherwise.

Advertising is a smart way to finance yourself; you could do a mock-up of your publication (a typical front page with a big news story and a 'you can advertise here' box, perhaps) and tout for business round a few shops and businesses taking your dummy issue or 'media pack' with you. For your *Wetwang News*, you could call on all the local shops; for your *Llama Breeder's Monthly*, you would have more success with specialist llama-oriented businesses, which would be further afield including mail order advertisers all around the country. If there are any rival publications around, see what adverts they carry and try to persuade the advertisers in question to support you instead.

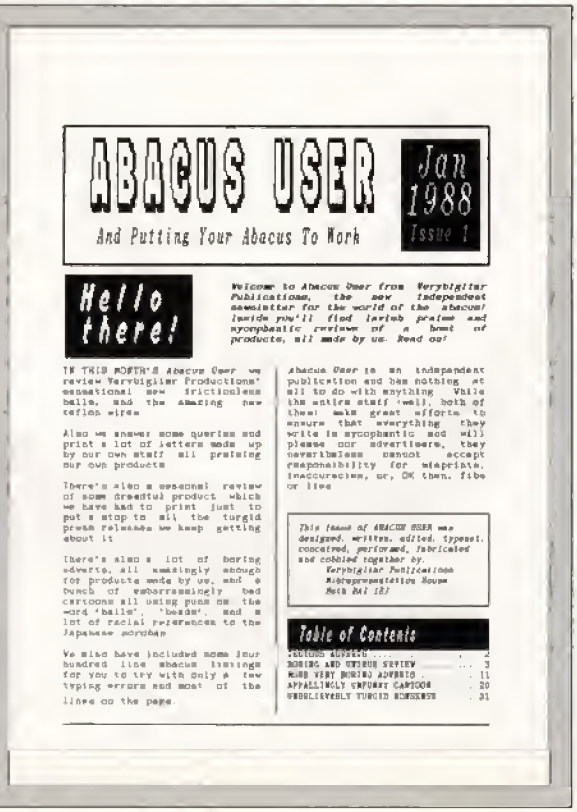
The production time could be anything from overnight to months and months. As a rough guide, if you're familiar with your DTP program, and you have your articles (and digitised or scanned pictures if using them) already on disc somewhere, and have your black-and-white photos ready for screening, you could lay out and print out your master pages in something like an hour or two each. An average small newsletter of, say, eight A4 pages reduced to two folded sheets of A4 could be done in a hectic weekend – *if* the material (except last-minute news) was all on disc already.

Sub standard

It's great to be able to farm out material to your roving reporters, but you'll probably still have to type in and 'sub'



▲ An example of a 'bad' layout – if you use too many fonts and images the message of the actual text gets lost.



An example of a better layout – uncluttered but eyecatching ▶

Make your deposit

One obligation you do incur as soon as you distribute your publication to the public (even members of your club) is legal deposit – you have to send copies to the British Library. Details can be had from The British Library, Copyright Receipt Office, 2 Sheraton St, London W1V 4BH.

Two column tricks

DTP programs all cope easily with two justified columns of text (or indeed with boxes of any size) but with a normal word processor you may be in trouble. Protext will do it – you can move text around in boxes via a 'box mode' – but LocoScript won't, at least not easily.

Perhaps the easiest way to get two columns with LocoScript is to make up your text one column wide and print out each column separately, putting the paper through the printer twice (or cutting the columns and pasting them on a sheet of paper in the traditional way.) The trouble is you have to line it up very carefully or you get non-parallel columns and the text lines on the two columns starting on different levels.

You could also do it by making an ASCII file and using a BASIC listing to print out the text in columns (such a listing is on the 8000 Plus Subscriber's Disc); alternatively, it is possible by judicious use of several different Layouts to do it directly from LocoScript (as mentioned in TipOffs last month) though editing text with three layout changes per line is a little cumbersome.

the articles yourself, which can end up being more tedious than writing the thing yourself in the first place! If you're lucky, you might have other PCW owners writing for you who can provide their articles on disc. 'Subbing' (sub-editing) material written by someone else can stretch from checking through for typing errors, to rewriting the whole article to be consistent with the style of the publication.

Getting your text to fit the available space on the page is unfortunately never easy. You mark out the area on the page layout plan area of your DTP package, read in the text from LocoScript, and always find it's too long or too short. Having every article continued on page 94 is as annoying for the reader as it is for the person laying out the pages. You can edit text from within your DTP program until the thing fits into the box it's supposed to, but if this involves major changes it can be tedious.

In fact, this is an important point when deciding which DTP package to buy. As you know, the four packages available are Newsdesk International (from Electric Studio), Fleet Street Editor Plus (Mirrorsoft), The Desktop Publisher (Database Software) and Stop Press (AMS). Of the four, Newsdesk and Stop Press are very 'graphics oriented' and don't allow you to edit the text once it has been placed on the page. To edit text with these you have to erase the entire article from the page, go back to a word processor and edit the file, go back to the DTP program and re-insert the modified article, hoping it fits now, so if you enjoy fine tuning text on the page and trimming phrasing to fit these won't suit you. Fleet Street and The Desktop Publisher do however allow you to do this on-screen editing of text to fit the space available.

The only real answer is experience – you quickly get to know how much space x words will take up and can make major changes to the original article while editing back in LocoScript. When it's approximately the right length you can then organise it into your DTP program. As a rough guide, a two-column A4 page with a couple of headlines and one small graphic will have around 400 words. Unfortunately there's no word counter in LocoScript; listings are often printed in 8000 Plus which will word count files for you, though.

Before you do commit the text to a box in your DTP program it's a good idea to print it out in draft quality and check for howlers. What the eye can miss on screen that is blindingly obvious in black-and-white is amazing. It's better to proofread text at the word processing stage before you actually print out your master DTPed page – these are notoriously slow to print out in high quality and it's frustrating to have to do it all over again just because of a word missed out!

Look good

There are a few common-sense points about the overall look of the pages. Stories should be split up into short paragraphs of 50-100 words and every few paragraphs there should be those cross-headings so beloved of the tabloids; without these, large expanses of text can be very hard on the eye. Mixing more than one or at most two different fonts on a page can end up looking a real mess; 'clip art' graphics should be used sparingly, no more than a couple per page, and they look horrible when enlarged at all; that 'olde worlde' Gothic script that all the font packages boast about should only be used for grave subjects, and if used in an all upper-case headline it looks wrong. Reversed-out blocks (white letters in a solid black box) can provide contrast effectively. In general, variety in headlines is more effectively achieved by using different styles and sizes of a single font (italic, bold etc) than by different fonts.

If you do see a fatal mistake on the master just as you set off for the printers, you can do a 'patch' – for example, if you realise with horror you've put 'We're pleased to say Father Brown is *not* recovering' instead of '...*now* recovering' the quickest way to rectify it is to print out the word 'now' separately, cut it out and paste it very firmly over the offending word. (Whenever you see single words or lines apparently askew in magazines or papers they've probably been patched over some horrendous error underneath. Unfortunately the more embarrassing the error, the more likely the patch is to fall off.)

Eventually you can take your masters to the printers and in a couple of days you should have your opus back. Distribution is another matter completely – club newsletters could be mailed, company or community newsletters delivered by hand, and parish magazines sold or given away in local shops.

At last you can relax – before starting the whole process all over again for the next issue.

exit

Legal beagles

The definitive guide to libel, copyright, contempt of court, sedition, blasphemy and other legal aspects of publication is *Essential Law for Journalists* by Walter Greenwood and Tom Welsh, published by Butterworth's.

Make it legal

It's extremely unlikely that you'll have to worry about problems of copyright – unless you start lifting whole articles from other sources. Anyway the burden rests on the party who believe their material has been infringed to prove their work has been directly copied. Conversely, if you think someone's stealing your words (not your ideas – they can't be copyrighted!) it's up to you to take action and claim for damages. In theory your work is copyrighted the moment it goes on to disc, and you certainly don't have to send any money or register anywhere to put '© 1988 Wetwang Publishers Inc. All rights reserved.'

The libel laws of publishing are desperately complicated, but should anyone take you to court for what you have written your defence would have to show that not only what you wrote was true, but that it was also relevant and in the public interest to say, for example, that Mr Smith was a Ku Klux Klan member in the middle of article about his shed collapsing.

In the case of a review you have a bit of leeway. As long as it is clear that it is someone's personal opinion that is being expressed, you can criticise what you like about a product. Only if the offended party can prove *malice* in the opinion do they have any redress.

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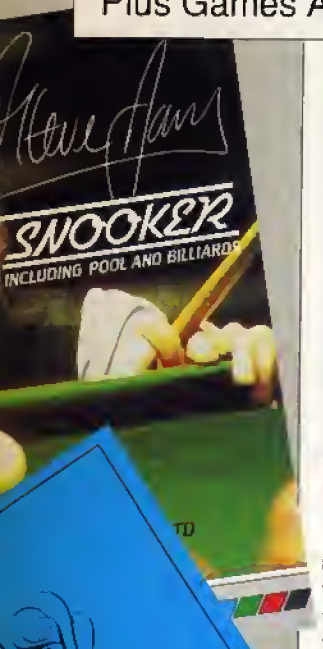
WAS THAT THE YEAR THAT WAS?

Tony Flanagan brings you this exclusive report from the Oscars of the games world, the 8000 Plus Games Awards for 1987



That's the peculiar thing about years, just like good intentions, they never last very long. Life, well, that just seems to go on and on and on in the same unchanging way – the taxman is permanently dissatisfied, the boss as ever wants to get his boot up your backside and, worst of all, the kids still expect to be fed! (The next thing they'll be wanting Christmas presents!)

If existence was at all bearable this year it was only because certain software companies in their wisdom (and not in the least bit motivated by pecuniary incentive) decided to release some excellent games. Indeed, the range was impressive, from highly immoral zap-and-blast-everything-that-moves games to adventures in which you – even with your mammoth intellect – spend months banging your head against a brick wall only to find the granite-headed juvenile delinquent who lives next door has cracked it within a matter of days.

Whatever the year's highs and lows, it's clear that adventures have been predominant. This no doubt reflects the rather perverse and unique nature of PCW users, who tend prefer to mangle their brains than break their fingers trying to make responses to arcade games their arthritic hands are really not up to. Of course, it would be incredibly limited if adventures were the only thing that were available. Fortunately, this year has seen some excellent shoot 'em ups and simulations.

Unfortunately, not all the releases have been outstanding. But, as Aynuk, my good friend and philosopher often tells me, "Yow car 'ave it all now can yer cock?" (translations on a postcard please). Still, what would we do without dross? There'd certainly be a lot less work around for dustbinmen.

Without further ado, let the 1987 8000 Plus Awards Ceremony Commence!!! [*Stern alarums followed by loud, obsequious applause, followed by mass outbreak of coughing, spluttering and obscene throat-clearing. An Irish dwarf, dressed in a wig and Moss Bros tuxedo, is hurled on stage. Tumultuous applause.*]

"Good evening," the dwarf begins. [*Loud hissing, followed by rotten tomatoes, putrid eggs and foul smelling political manifestos from the audience which, it appears, contains a number of prominent MPs*]. "Er good evening, and thank you for your warm applause. The time has come, as it does every year, to award awards to things that deserve to have awards awarded to them.

ADVENTURES

"The first category is for Adventure Games. This was undoubtedly the most difficult section of all to judge, with a whole host of adventures vying for first place. Ever since the legendary Hitchhiker's Guide to the Galaxy, Infocom has led and continues to lead the market in text-only adventures by virtue of their humour, sophistication, and packaging. For this reason, a special category has been created. The nominations for *1987 Best Infocom Adventure* are:

Moonmist – Mystery in a haunted Cornish Castle, the American tourists would jes' lurve it.

Sorcerer – Learn to cast spells or risk being turned into a warty toad.

The Lurking Horror – Boy meets ghoul in an American college.

Stationfall – Designed by Steve Meretzky, the follow up to his last successful science fiction adventure, 'Planetfall'.

Leather Goddesses of Phobos – Lewd, salacious, sexist, hilarious. Who could want more?

And the winner is [*the dwarf struggles to open an overenthusiastically sealed envelope*] Leather Goddesses of Phobos!

"On this side of the Atlantic, the standard of adventures also continues to rise. Software houses such as Level 9, Rainbird and Ariolasoft have conspired to produce genuinely challenging adventures complete with graphics screens showing where you are – all this on the humble PCW. The nominees for the *1987 Best British Adventure*, all of which have all provided many hours of high quality despair, are:

Lord of the Rings (Melbourne House) – Faithful but imaginative adaptation of the Tolkien classic

The Silicon Dreams Trilogy (Rainbird) – Three intriguing science fiction based adventures

The Pawn (Rainbird) – Excellent graphics, brain-straining challenges and predictable flatulence jokes in the kingdom of Kerovnia

Guild of Thieves (Rainbird) – A kleptomaniac's version of The Pawn, with equally good graphics and puzzles.

Fourth Protocol (Ariolasoft) – Nuke those commies! A politically dubious but fun version of the F. Forsyth novel of the same name.

And the winner is... The Pawn!

ARCADE GAMES

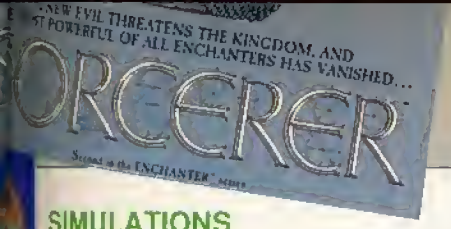
"And so on to the Arcade Games section, in which, as for the Adventure sections, the competition was hotter than the Chicken Vindaloo in the Bath Taj Mahal. The speed and quality of graphics that many software houses are squeezing out of the old word-processing PCW is pretty impressive. The nominations for *1987 Best Arcade Game* are:

Starglider (Rainbird) – a peculiar version of that well-known game Shoot the Revolving Coat Hanger, featuring wire frame (or 'vector') graphics.

Tau Ceti (CRL) – a compelling mixture of strategy and shoot 'em up in space

Head over Heels (Ocean) – a fascinating double act with superb 3D graphics and infuriating puzzles

And the winner is... Head Over Heels!



SIMULATIONS

"Now we turn to the *1987 Best Simulation Game* award. Simulations are what university researchers call the games they play. Funding committees are usually very impressed when given a presentation on relativistic targetting mechanics in the hyperspacial continuum, but less wowed when this turns out to be a list of high-scores on Space Invaders. The nominees for Best Simulation are:

Steve Davis Snooker (CDS) – You can pot any colour you like as long as it's green.

Strike Force Harrier (Mirrorsoft) – Learn to pilot a Harrier. No matter that you missed the Falklands outing, get in training for next time.

Leaderboard (US Gold) – Golf on the PCW may sound strange, but works surprisingly well.

And Best Simulation of the year is... Leaderboard!.

COMPILATIONS

"Now we come to the category for *1987 Best Games Compilation*. Compilations are, in general, marketing ploys to recycle old games, but are usually good value for money. There is an unwritten law of the computer industry which states that all compilations must have three and only three games on them. Suitably enough, there are three nominations for Best Compilation:

Silicon Dreams (Rainbird) – After a disappointment by not winning the Best British Adventure category, it's second time lucky for this trio of adventures.

Distractions (Design Design) – Three arcade games, 2112AD, On The Run and NEXOR, a 3D arcade adventure in which a man with what seems like terminal diarrhoea trots desperately across the screen in search of a panacea.

Classic Collection (Tynesoft) – A trilogy of simple but fun golden oldies, Space Invaders, Frogger and PacMan.

The award of Best compilation of 1987 goes to... Distractions!

SPECIAL AWARDS

"To conclude we come to the *8000 Plus Special Awards*. These are voted on each year in a secret ballot of the entire membership of the Academy of 8000 Plus Games Reviewers whose Names are Anagrams of Nyto Galanfan:

- **Most Hyped Game:** The Living Daylights (Domark). To advertise this game Domark went to such lengths as hiring Timothy Dalton to make a film tenuously connected to it. The film did well, though.
- **Dullest Game:** Heathrow Air Traffic Control/Southern Belle (Hewson). A great game for train spotters. Now officially prescribed by NHS doctors as an insomnia cure.
- **Best Packaged Game:** Leather Goddesses of Phobos (Infocom). Containing national health glasses and smelly bits – a must for myopics! Reputedly also available in a special leather-bound edition.
- **Most Trivial Game:** Trivial Pursuit, of course (Domark). In which you demonstrate your brain's utter dearth of useless facts in an effort to avoid meaningful conversation.
- **Worst Game:** PSI-5 Trading Company (US Gold). The only thing that is comprehensible is your incomprehension.
- **Overall Grand Master Supreme Best Game of the Year:** Head Over Heels (Ocean). Say no more."

Embarrassed note

It appears that US Gold have actually withdrawn Leaderboard, the winner in the Simulations category, from sale because of some bugs that have come to light in the scoring system. Oh well, it was still a fun game to play even if you did come home 295 over par.

Epilogue

So that was 1987, and what an unforgettable year it has been, so unforgettable in fact that after New Year's Eve I doubt whether I shall remember any of it. Still, may I take this opportunity to wish you all a Merry Christmas, a Happy New Year and leave you with this rather pithy saying I picked up (along with a few antisocial diseases) during my time in Asia: May the warts on your chin be as numerous the pimples on your bottom!

EXIT

Those awards at a glance

BEST INFOCOM ADVENTURE
Leather Goddesses of Phobos ● Infocom

BEST BRITISH ADVENTURE
The Pawn ● Rainbird

BEST ARCADE GAME
Head Over Heels ● Ocean

BEST SIMULATION
Leaderboard ● US Gold

BEST COMPILATION
Distractions ● Design Design

OVERALL GAME OF THE YEAR
Head Over Heels ● Ocean

● *More detailed info on all the games mentioned here, including which games won't run on the new PCW 9512, can be found in this month's Good Software File towards the back of the magazine.*

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LANGFORD'S PRINTOUT

A page foolishly handed over to SF author DAVID LANGFORD who just happens to own an AMSTRAD

THE PAPERLESS FUTURE

Once in a while, when green screens get too much, I escape to a North Wales flat where my wife forbids computers. Amazing how much hard work goes into bashing a portable typewriter.... When dragged away from the ancient keyboard, I dutifully tour mountains and castles: the most boggling scenery tends to lurk in estate agents' windows, because houses in "remote" parts like Snowdonia are absurdly cheap. No one wants them.

The computer connection emerges when you remember those books about how by 1984 we'd all be living in country villages, working at keyboards linked to the office via modems. Norman Macrae's eccentric *The 2024 Report* described how: "a typical telecommuter... keys in figures from her terminal in the Isle of Arran to the computer in Saudi Arabia."

One hopes the company's paying her phone bill. Meanwhile, where are these figures that the typical worker is typing *coming from*? Is she making them up? Are they appearing on another terminal, in which case you might ask why they're going via Arran at all?

The Macrae book gets progressively sillier, with ICBMs made obsolete by "telecommuted computer messages" which redirect them homeward. (All warmongers equip their nukes with radio receivers and spare fuel for the return trip.) Even the straightforward Isle of Arran scenario makes you wonder what chance there is of "remote" office work becoming the rule. Many companies would resist strenuously: outfits that can't bear the idea of people working at their own pace, so that if you finish the day's chores quickly they insist you stick around staring at the wall until five o'clock, while workers trying to complete a long job while it's fresh in their minds get thrown out at five to avoid overtime payments.

I have a candidate for another major reason why so few people are living in idyllic Snowdonia and doing their work via modem. The reason is British Telecom.

Typical conversation

AUTHOR: OK, my new meganovel is ready to go. I can send it on any standard-size disk, 3", 3½" or 5¼", or if you've got an electronic mail link we can....
THRUSTING, GO-AHEAD PUBLISHER: Oh God, just post me a manuscript.

Bitch, bitch

When Arthur C.Clarke finishes an SF novel, as all too frequently he does, newspapers go *Oooh* and *Ahhh* at the delivery route: squirted by satellite link from the Clarke word processor in Sri Lanka to his literary agents in New York. Gosh, that's science fiction! I must submit my next novel that way!

Satellites are too pricy for mere mortals, so we're stuck with the phone. Let's see, the bog-standard modem transmission rate is 300 baud, ie. 37½ characters per second. My last novel ran to 85,000 words, the usual range for non-blockbusters being 60,000 to 90,000 words. Say 600,000 characters. Transmission time to the publishers: well over 44 hours. Rather your phone bill than mine.

A higher transmission rate is possible: 1200 baud, taking 11+ hours. Even at night, this is ludicrously more expensive than posting two kilos of print-out (you can reduce this weight by using very thin paper, a false economy since the publishers will then hang it up in the room where very thin paper is most in demand)... or even a disc. The "industry standard" transmission rate of 9600 baud, which starts to make the process feasible, is too much for British Telecom's antiquated phone lines.

Other snags? Such transmissions generally won't allow special control characters such as in LocoScript files (they must be converted to ASCII – bang go all those boldface, underline and italic codes). And, having experimented with short chunks of text, I can guarantee that many nasty things will happen to any novel-length manuscript as it passes through the rumble, flutter, wow, echo and reverb facilities of BT's long-distance lines. Some communications software has built-in error checking and keeps re-transmitting spoiled text until it arrives OK. I've watched clever programs send one block (128 characters) of text 63 times without BT letting it arrive unscathed.

Fool's gold

Next I tried "Telecom Gold" electronic mail, which is supposed to make things easy and cheap by letting you enter text via a reliable local phone line (it's transmitted cross-country through the PSS packet switching system). You learn the meaning of patience as you load MAIL232, dial up PSS, enter special characters which aren't in the Telecom Gold instructions but are essential before this will work at all, and then type a 13-character code, followed by a 10-character PSS identifier, after which Telecom Gold requires your 9-character customer identifier, and then a password....

Despite BT's soaring profits, the system stays expensive and naff. To punish you for using less phone time by loading at higher baud rates, they charge you per *character* sent or received. This can be a lot of characters when like my business partner in Wiltshire you can't dial into the cheap PSS system except via a noise-ridden long-distance line to Reading,and most of what you type in consists of corrections to previous keystrokes which have been garbled.

It's like this in the Home Counties, Silicon Valley UK, where you'd expect a high-class phone service. There's objective confirmation that we've got a terrible system: American immigrants with a basis for comparison keep saying so, even while praising our post office and the friendly way our policemen aren't always laden with ruddy great guns.

In the USA, many more people do manage to work from a home terminal as part of a company. In Britain, we have British Telecom, and if I tried to transmit documents from Snowdonia (where last time it took me sixteen efforts to get through to London at all), this column would probably start:

Onxe nn a{SMJAHJUhsd wxile, whnfgrn screns....

EXIT

User-friendliness, BT style

When you exit from Prestel the system tells you if new electronic messages have arrived, and gives you the option of pausing to read them. When you leave upmarket Telecom Gold, the system reports any messages, and then with an electronic "Har Har" shuts itself down, leaving you to enter all those codes again if you want to read the new stuff. Interesting contrast, eh?

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GET IN ON THE ACT

How does the new Data Protection Act affect you?

The aims of the Data Protection Act, in force since November 11th this year, are as simple as they are laudable: if there are any details about you stored on computer, you have the right to know what they are, the right to change them if they are wrong or misleading, the right to complain to the Data Protection Registrar if something's amiss, and the right to compensation if you suffer as a result of inaccurate information.

As 8000 Plus readers will know, there's no mystique about information concerning you being on computer; what sort of information can be stored, and what would be done with it, would be the same as for manually written details in a notebook – and the Act does not cover manual records at all, which would include nearly all your school and exam records, for example.

What makes computer-stored info sinister is that thousands of individuals' records can be transferred en masse in seconds to anyone else's computer; wrong or potentially damaging information about you can disseminate itself very rapidly from a single source.

Subject to the Act

As a 'data subject', you have a right to know precisely what information is stored about you on computer by any given organisation, with certain exceptions. *If* the organisation with your details has registered itself as a 'data user' (not registering can be a criminal offence, but even so only 150,000 of the estimated 250,000 such organisations are at present registered) you can find out what they know about you as follows: in your local main library there will be the 'Data Protection Register' which lists all the registration numbers of data users. You can then look them up on microfiche under their number and see what sort of information they might hold about you, and to whom this information might be passed on. There is also an address to write to if you want to have a look at your own records.

The data user can ask for a fee of up to £10 to supply your records (to see all seven categories of your police records would cost you £70, for example) and must send them within 40 days. If you are dissatisfied with the results, like if the data user refuses to correct wrong information, or if you think the data user is hiding something, you can go to the county court or – better and cheaper – to the Data Protection Registrar.

Exception proves the rule

However, some data is exempt and the data users are not required to register, so you would have no right to see such files even if they held data about you. Data held only for "the purposes of word processing", or held purely for payroll and accounts, is outside the Act; so is data held by private individuals for their own personal or household purposes, or anything involving national security.

For certain other classes of information, you can sue for damages if you suffer from it being wrong – unfortunately, you have no right to see the information, so you presumably wouldn't know until it was too late. Examples are police records being used for anti-crime purposes, statistical research, or the Inland Revenue's tax records.

A further point is that the Act covers facts and opinions but not intentions – so your employers, for example, would have to tell you that their files described you as 'lazy, unpopular, unreliable', but wouldn't have to disclose their intention to 'dismiss this employee if things don't improve'.

Your obligations

So you're using your PCW to store data about people – does the Act apply to you? Straight payroll and accounts details on your employees would *not* render you liable to register; neither would straight name-and-address lists of your club members used solely for standard mailshots. However, if you store *any* other information, or start mailmerging – ie., using LocoMail or Protext commands like 'if address contains "London", print this paragraph' – your club would have to register as a data user, however harmless or boring the information is.

A more comprehensive account of the rights of the data subjects and the obligations of computer users can be found in your local library (Data Protection Act: Guidelines) or in *Data Protection: Putting the Record Straight* by Roger Cornwell and Marie Staunton, available from the National Council for Civil Liberties at 21 Tabard St, London SE1 4LA, price £3.95 + 40p postage. Alternatively, a leaflet *Your Right to see your File* is available from the same address at £1 inc. postage. For official information write to The Data Protection Registrar, Springfield House, Water Lane, Wilmslow, Cheshire, SK9 5AX.

Credit note

Credit references files have been subject to right-of-access regulations for several years. The fee to see your file is only £1, and you can see it whether it is held on computer or on paper.

Where's Big Brother?

Y[illegible]ly figure on several hundred [illegible] round the country. If you [illegible] your council will [illegible] sold your details to various [illegible] organisations and credit refere[illegible] [illegible] school [illegible] who's had [illegible] [illegible], etc., will be down [illegible]

[illegible] DVLC will [illegible] your records on to the Pol[illegible] [illegible], where you will already be if you [illegible] found guilty of an offence. Local police force computers may have other information such as parking offences or keyholders of shops and factories.

British Gas, British Telecom, the Electricity Board, local authorities, banks, credit card companies, book clubs, [illegible] subscription departments (yes, we're registered!), trades unions, political parties, pressure groups... the list is almost endless. Unless you have several thousand pounds to spare in application fees you'd never be able to find out what each one of them knows about you.

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A comprehensive yet easy to learn touch typing course based on the famous Pitmans method. It has been designed to teach the correct method for the skill of fast, efficient typing. The emphasis is heavily placed on rhythm and accuracy rather than testing by speed at an early stage.

4 FIRST CALC (PCW, CPC6128 and PC versions) £29.95

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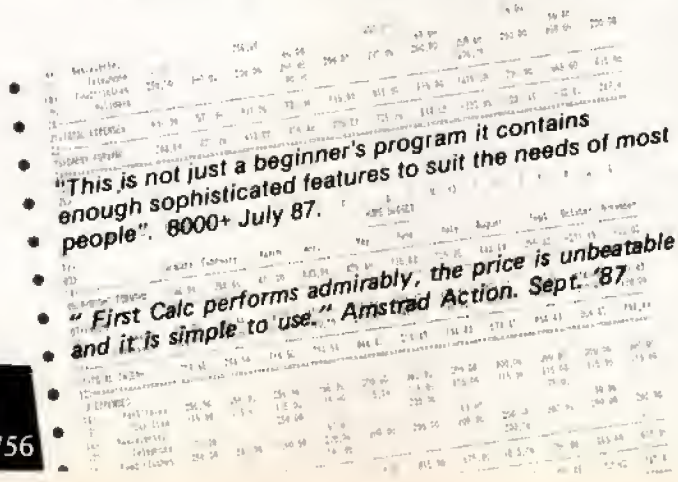
A full range of utilities including random access, sector editing, error handling, etc. Simple RSX commands interface directly with the resident BASIC. A powerful EXEC command allows a BASIC statement to be executed from within a program to evaluate calculations.



"This is not just a beginner's program it contains enough sophisticated features to suit the needs of most people". 8000+ July 87.

" First Calc performs admirably, the price is unbeatable and it is simple to use." Amstrad Action. Sept. '87

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MINERVA

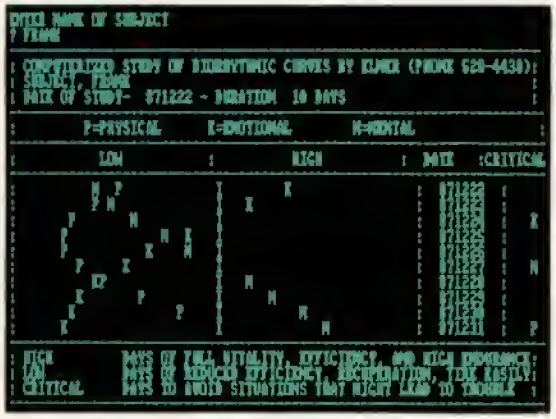
LIGHT RELIEF

Frank Peters gets into the festive mood with a few Public Domain games

The old ones are always the best, and you can't get a more traditional game than 'Adventure' – the good old caves and treasure puzzle. Aptly named ADVENTURE.LBR, Adventure is a 'library' file which contains the CP/M run file ADV.COM plus help and data files. It takes up the whole of a A: drive disc so you can see there is a large quantity of caverns, passage ways and rooms to search through before you get bored. It may not be as funny as some adventures like for example the Hitchhikers Guide but even so, this game will keep you busy for many a late night!

For those of you wishing to know just how exhausting the festive holiday will turn out to be, why not resort to checking out your biorhythms? With BIO.COM you simply type in your date of birth, the start date you are interested in, and how many days of biorhythm chart you want. The program then prints out a chart onto the screen (press ↑P first if you want hard copy as well) telling you the bad news! From my example printout you can see that New Year's Eve will be my critical day physically!

So you are unable to pop out for a quick round the local golf course eh? Snow too thick on the ground? Never fear 'cos GOLF.COM is here! Your own armchair 18 hole golf course with out having to swing a single club. Enter your handicap, your name and what your main golfing difficulty is and you're at the first tee. Select your club and you are off up the fairway. See you at the 19th hole!

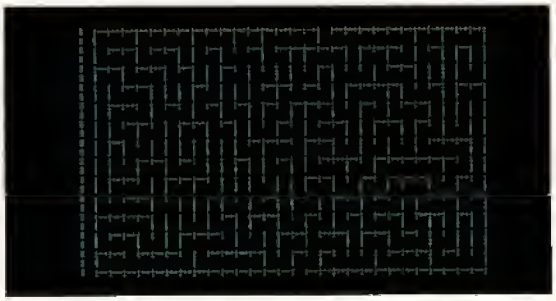


▲ A peaky set of biorhythms from BIO.COM

▲ The rub of the green with GOLF.COM

For our younger viewers

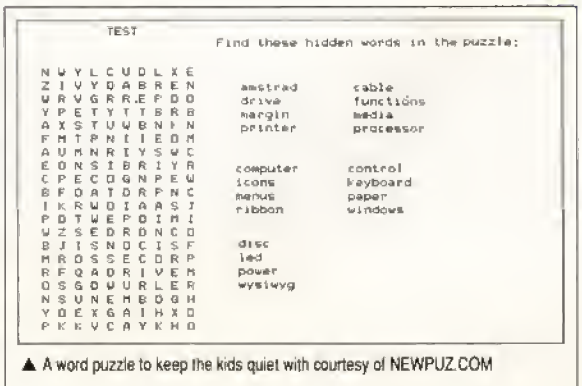
Those of you with younger children that enjoy finding their way out of mazes, how about an inexhaustible supply of mazes? MAZE.COM will generate a 2 dimensional maze of almost any size that should frustrate any child into hours of peaceful bliss! Just try the one printed out here as an example!



▲ Amazing – an infinite variety of mazes generated by MAZE.COM

Have you wondered just how long it can take to make up those squares of jumbled up letters where you then have to find the words? An ideal choice for computerisation, and someone has already done it. NEWPUZ.COM will ask you how many columns your printer has, whether you want the solution printed out too, what the width and height of the puzzle is to be, how many words it will contain, and after prompting for the header text to be printed at the top of the paper you enter in all the words you want scrambled up into the square of letters. Simplicity itself!

You can't look at public domain games without that cornerstone of BASIC games, STARTREK. You take the role of Captain James T. Kirk of the U.S.S. Starship Enterprise and boldly go where no man has gone before in the search of the dreaded klingons. At your fingertips you have control over Phasors, Photon Torpedoes, Defense Shields and Communications channels. The onboard computer advises you of damage status, energy levels and positional information. Unusually for PD programs there is a is a good version specifically for the PCW using Mallard BASIC which makes good use of the PCW screen.



▲ A word puzzle to keep the kids quiet with courtesy of NEWPUZ.COM

Where to go

There are two ways to get hold of PD Software: either join the *CP/M Users Group, 72 Mill Road, Hawley, Dartford, Kent DA2 7RZ*, or write with an SAE to *PD Software, Winscombe House, Beacon Road, Crowborough, East Sussex TN6 1UL (08926 63298)*.

Both outfits work as clubs where there is an annual fee plus a copying charge per disc you want, so the PD software isn't totally free. Alternatively, if you have a modem, get this month's programs direct from Frank Peters' bulletin board on 0462 700644.

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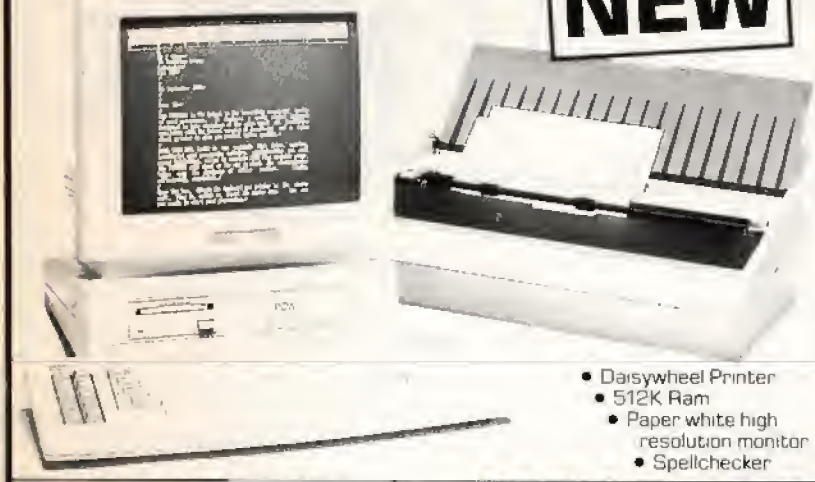

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INDEX MAKER

Note every reference in this month's BASIC listings and impress publishers.

Book Indexer

When you eventually do manage to complete your 500,000 word in-depth study on 'Locomotives and Rolling Stock on the Great Mull of Kintyre Railway 1901-1923' and are sending it round publishers, what will impress them more than a full and thorough index with every reference and entry noted with the correct page number?

While creating an index is usually a long and painstaking exercise it is also the very thing that the PCW is just made for. Here is a program which takes most, if not all of the pain out of creating an index.

The idea is that when you're polishing up your final draft of your thesis in LocoScript you go through the text surrounding any word or phrase that you want to appear in the index with curly brackets { and }. For example if you write the phrase "The most imposing edifice of the many fine examples of Victorian railway architecture was {Bellochantuy Station}" the program will extract the words *Bellochantuy Station* for the index along with the correct page number.

Running the indexer

The first step from LocoScript file to index is to convert your masterpiece into an 'ASCII file' which BASIC can read. Do this with [f1] in LocoScript 2 of [f7] in LocoScript 1 and use the 'Page Image' option. Make sure that the resulting ASCII file is in Group 0 of your LocoScript disc – the leftmost group.

```
Aardvark                                Page 45
Bellochantuy Station                    Page 47
Bluffers Guide to Gerbil Breeding       Page 47
Gematria                                Page 46
gerbils                                 Page 45
Industrial strength compost             Page 46
Llama kidneys                           Page 46
Sine Ardua and Astra                    Page 47
South Pacific                           Page 47
The Meaning of Life                     Page 46
Zeebidee                                Page 45
```

```
What is an Index?
An index is the bit you put at the end of your book
if you really had important things to say and that
making it up as you went along. It is the place whe
interesting words like (Aardvark) and (Zeebidee) (j
which isn't very interesting but with an extra 'e'
interesting).
        It also allows gerbil lovers to ignore the
books about Llamas and Hamsters and only read the e
(gerbils). For as everyone knows 'gerbils' is a won
by definition instrinisically funny.
        Llamas are all right and hamsters are only
boring but every time I hear the word Gerbil, jerbi
desert rodent of the subfamily Gerbillnae. A creatu
intrinisically funny. A useful word to use in compu
have to laugh.
        In fact many's the long winter evening I've
repeating intrinsically funny words like "gerbil",
"database" until the tears rolled down my cheeks.
```

Restart the PCW ([SHIFT]+[EXTRA]+[EXIT]) to load CP/M and then load BASIC. Type in and save the program (as described in the 'How to type in a listing' box). Run the program, and when it asks for the 'Text File Name' put your LocoScript disc in the drive and type in the name that you gave the ASCII file (don't include any spaces in the name even though Loco's disc manager directory may imply there should be).

You are now asked for the page you are starting at. If your document is all in a single file then you should reply `1`, If you really have a 500,000 word thesis you will presumably be storing it in several different files which you will have to index separately. If you know that your second chapter file constitutes pages 13 to 20 of your book, then when indexing that file type `13` as the first page number.

The program then opens the file and runs through each line looking for {s and }s. Anything between the brackets is written to a special temporary file. Once this is complete (and it can take a while with a big file) the indexer then starts to sort the index into order.

You will be asked to think of the name of a file to hold the final index in.

Getting at your index

When the indexing process is finished, you will have a new file in Group 0 of your LocoScript disc with the name you chose for the index. To view this all you need to do, while still within BASIC, is to enter `TYPE filename` (where `filename` is the name you have chosen) and it will be listed out on screen.

To use this in LocoScript just 'Create' a new file and then use the 'Insert text' command to load it into LocoScript. There may be a bit of sorting out to do to get it neat and tidy but this should not take long.

```
10 cl$=CHR$(27)+"E"+CHR$(27)+"H"                                                    06F1
20 index=0:word=0                                                                   06C2
30 PRINT cl$                                                                        03FD
40 INPUT "Text File Name"; text$                                                    0082
50 IF FIND$(text$)="" THEN PRINT "File not found": GOTO 40                          15C8
60 INPUT "What page are you starting at";page%                                      1233
70 PRINT cl$:PRINT "Checking file"                                                  0CE7
80 OPEN "I",1, text$                                                                0618
90 OPEN "O",2, "m:temp"                                                             06EF
100 WHILE NOT EOF (1):LINE INPUT #1, line$                                          1065
110 len%=LEN(line$)                                                                 0666
120 FOR x=1 TO len%                                                                 0679
130 let$=MID$(line$,x,1)                                                            0798
140 IF let$=")" THEN index=0:PRINT #2 TAB(80) "Page" page%:word%=word%+1            1968
150 IF index=1 THEN PRINT #2 let$;                                                  0C0B
160 IF let$="{" THEN index=1                                                        0960
170 IF let$=CHR$(12) THEN page%=page%+1                                             0CC1
180 NEXT                                                                            0339
190 WEND                                                                            0323
200 CLOSE 1:CLOSE 2:PRINT cl$                                                       0A69
210 PRINT "Number of words in index is " word%                                      1168
220 INPUT "Name for sorted index";index$                                            117B
230 PRINT "sorting......."                                                          0897
240 DIM line$(1000)                                                                 04C3
250 OPEN "I",1,"m:temp":OPEN "O",2,index$                                           0065
260 WHILE NOT EOF(1)                                                                070F
270 maxline=maxline+1:LINE INPUT #1,line$(maxline)                                  124F
280 WEND                                                                            0322
290 FOR i=2 TO maxline                                                              0811
300 PRINT CHR$(13);"line";1;"/";maxline;                                            0004
310 FOR j=1 TO 1 STEP -1                                                            0764
320 IF UPPER$(line$(j))>UPPER$(line$(j-1)) THEN 350                                 1081
330 SWAP line$(j), line$(j-1)                                                       0909
340 NEXT j                                                                          035E
350 NEXT i                                                                          035F
360 FOR i=1 TO maxline                                                              080A
370 PRINT #2,line$(i)                                                               068C
380 NEXT                                                                            033B
390 CLOSE: ERA m:temp                                                               0811
400 END                                                                             02BC
```

codes to print for clearing the screen — 10
find the ASCII input file to be indexed — 40, 50
open a temporary work file TEMP on drive M — 90
read a line of the input file — 100
look at each character in the line — 120, 130
check for { or } and store any marked words in the file M:TEMP — 140, 150, 160
check for a new page — 170
close the input files — 200
get ready to sort the index into order — 220, 230, 240, 250
see Issue 12 (September 1987) for how this sorting routine works — 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380
close the files and erase the temporary work file — 390

The last thing to do of course is remove the curly brackets from your original LocoScript file. This is relatively simple using [EXCH] to replacing curly brackets with nothing. However hold off doing this until you are certain you have completed your final draft. If, for instance, you want to add another 20 pages in the middle of your book then if the index markers are in the file still all you need to do is run the program again to get a fully corrected version.

If your book is in chapters indexed separately, so you end up with half a dozen mini-indexes which you wish to merge, there is no problem. Merge all the index files together (either using CP/M's PIP, or in LocoScript by repeatedly using 'Insert text' and making a *simple text* ASCII file of the result). In CP/M copy your combined index file onto the M drive and call it TEMP – then load the index program and type `RUN 220`. This runs only the sorting part of the program – from line 220 – and sorts your rough combined index into a new sorted one.

Don't like the way it works?

It may be that you use curly brackets a lot in your text and they are inconvenient as an indexing marker – you can choose your own markers by altering lines 140 and 160. Replace the close-curly in 140 by the character you want to *end* an index entry, and the open-curly in 160 by the character chosen to start an entry.

The program knows what page number it is on by keeping a note in the variable `page%`. LocoScript puts a special symbol in at the end of each page (ASCII character 12) and every time it meets this character it just bumps up the page count by one.

This makes it more difficult if you are using another word processor but you can get round it by yourself putting a special character at the end of each page – obviously something you would never use in your normal text (say for instance @) and then change line 170 to read, in this case, `IF let$="@" THEN page%=page%+1`.

Possible problems

If you try to write the index file back to your LocoScript disc directly you may get an 'disc full' error message. This is because LocoScript has filled the disc with Limbo files, which presumably you don't want any more. Go back into LocoScript and erase all your Limbo files (use the Options menu to do 'Show Limbo files' the erase them normally). Now there will be enough room for BASIC to put the index file on the disc, so run the indexer again.

Typing Tutor

by J.T. Brien

The one thing every prospective computer expert must come to terms with is finding their way around the PCW key-board. You may not need to be a touch typist to be a successful computer buff but it does waste a lot of time if you can't type at a reasonable speed.

This is where our latest typing tutor is so worthwhile. It encourages both speed and accuracy in only 26 lines of BASIC. The idea is that you type in the sentence that you want to practise (*Now is the time for all good men...etc*) and then you have to type it again as quickly and as accurately as possible.

The cursor moves over the text again this time noting all the mistakes you make and also timing how quickly (or slowly) you complete the exercise. Then in a rather heartless manner it insists on telling you these usually depressing details. You can then go back and try again or enter another sentence to practise. The sentence can be up to 255 characters (including spaces) so there is plenty of scope to make mistakes.

For the novice programmer, one point to note is the 'DEF FN...' definition in line 10 which allows you to place text where you want on the screen – this is explained further in TipOffs this month. This is a simple version which just chooses which line you want (line 140 uses it to make the text be printed on row 18 of the screen for instance).

Line 80 is the line where the program sets the PCW clock to zero, to allow it to time the exercise. The loop in lines 90 to 120 compares your typing with the target sentence, adding one to the mistake count 'm' for each wrong press. The clock is read in line 130 at the end of the exercise. Line 200 is a particularly cunning way of saying 'if the user typed "D", go to line 40; if "Q" was typed, go to line 220; if "A" was typed go to line 70.

```
10 DEF FN1$ (y)=CHR$(27)+"Y"+CHR$(y +31)+CHR$(31)                    0CDB
20 DEF FNt(X)=INT(x*10/16)                                           07A4
30 cls$= CHR$(27)+"E"+CHR$(27)+"H"                                   0760
40 PRINT cls$:PRINT FN1$(10),,"Type in the line you want to practise?" 1A73
50 PRINT FN1$(15),                                                   0543
60 LINE INPUT"",ex$                                                  05E7
70 c=0 : m=0                                                         0246
80 PRINT FN1$(15),:POKE 64504!,0                                     0985
90 WHILE c<LEN(ex$)                                                  0648
100 GOSUB 230                                                        03E4
110 IF a$ =MID$(ex$,(c+1),1) THEN c=c+1:PRINT a$; ELSE m=m+1         11DD
120 WEND                                                             0315
130 secs = FNt(PEEK(64504!))                                         0804
140 PRINT FN1$ (18), m" mistakes in "secs"seconds       "            1193
150 PRINT FN1$ (22),, "D to practise a different sentence"           1485
160 PRINT FN1$ (23),,"Q to quit"                                     09C3
170 PRINT FN1$ (24),,"A for another timing"                          0E28
180 GOSUB 230                                                        03F4
190 a$=UPPER$(a$)                                                    03EA
200 ON INSTR("DQA",a$)GOTO 40,220,70                                 0973
210 GOTO 180                                                         039E
220 END                                                              02BE
230 a$=INKEY$                                                        03A5
240 WHILE a$ =""                                                     040E
250 a$=INKEY$:WEND                                                   0537
260 RETURN                                                           03BE
```

Good programs needed!!!

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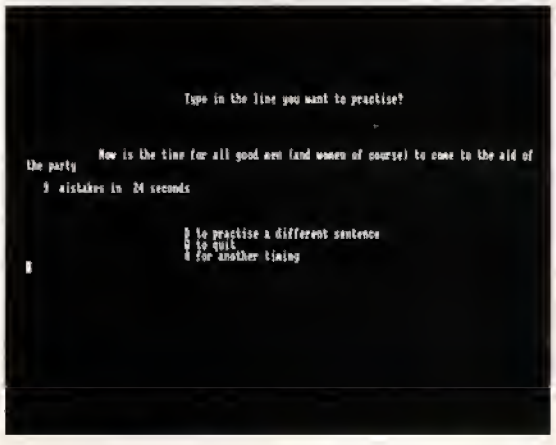

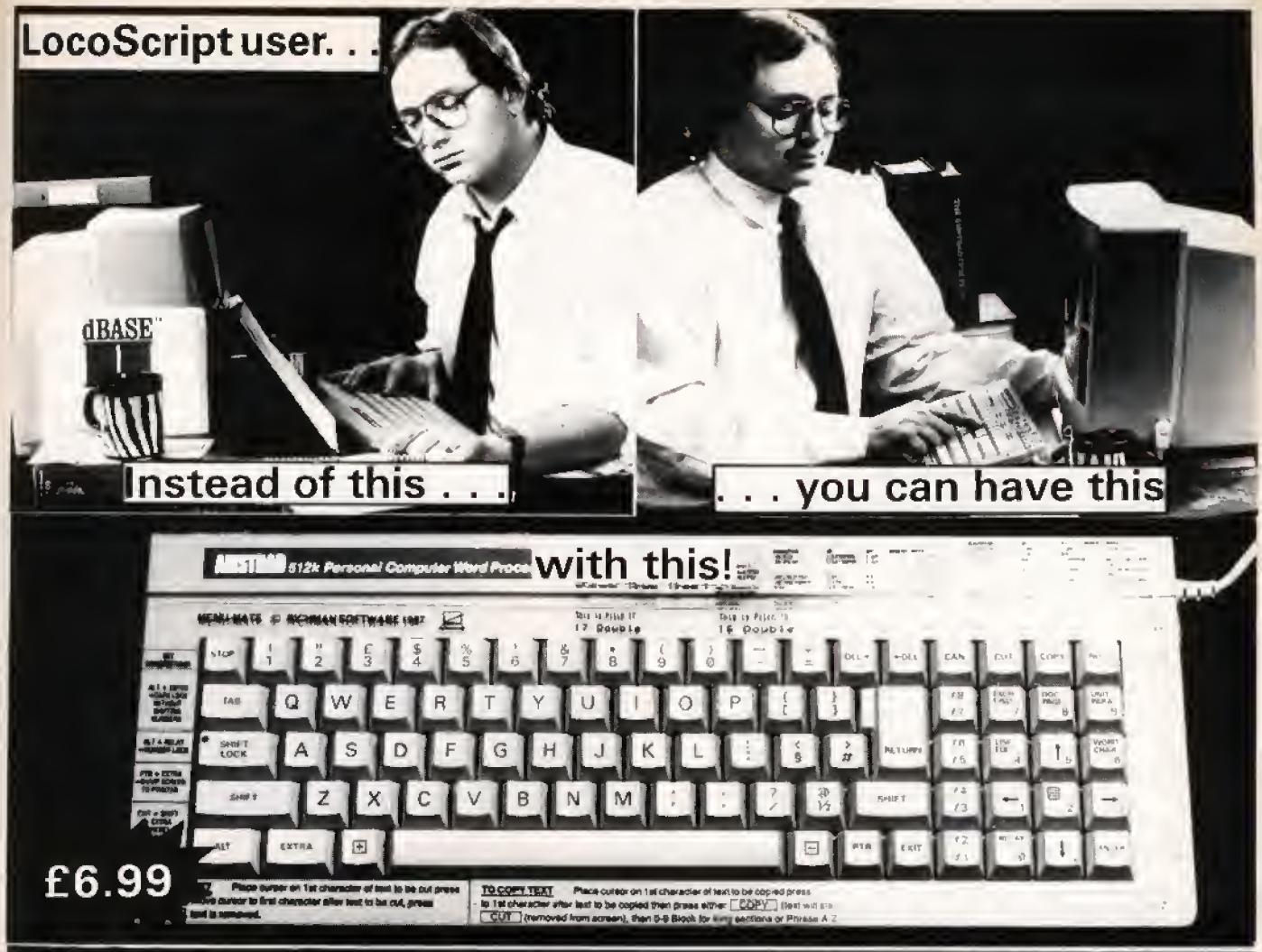

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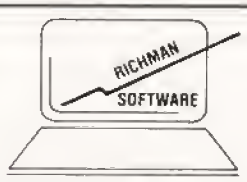

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Decision maker

by Kelvin Stott

Since last month's main feature was on Artificial Intelligence it seems an ideal time to carry a fine example of the subject – a totally infallible Decision Maker. The difference is you don't need any fancy programming languages for this one – all you need is 13 lines of BASIC and a trusting nature.

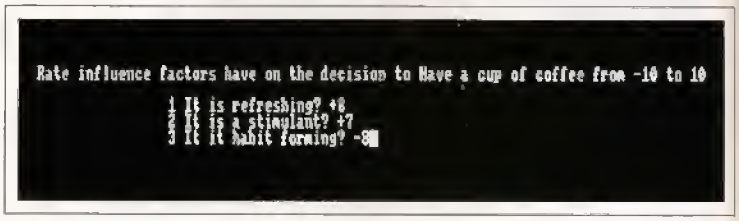
It works on the basis that if you have a difficult problem with a lot factors influencing it, you can work out the answer mathematically. What you have to do when you run the program is type in the number of options you have to choose from, and it then asks you to describe each option. Don't forget to press [RETURN] after each line you input.

The program asks you how many factors influence each option and you have to list them. These 'factors' are essentially statements which are assumed to be true, eg. "I like tea". Then you have to give 'weighting' to each factor between –10 and 10. If the factor is a positive advantage you give it a plus figure, if it is a disadvantage you give it a minus figure.

So suppose you are trying to work out whether to have some tea or not: the factor "I like tea" would have quite a strong positive influence on your choice, maybe +8. However, the factor "I like Perrier Water" has a negative influence, maybe -8. A rating of zero would mean, "This factor is totally unimportant."

The program works out the mathematics and then prints out its suggestion.

The biggest practical advantage of this kind of program is that it forces you to think analytically about the problem and to break it down into its component parts. For this alone it must be worth your while typing it in. Of course whether you accept the Decision Maker's advice is another matter... 8000 Plus is not responsible for anyone going bankrupt because the Decision Maker made a wrong decision etc. etc.




```
10 DIM f$(50):c=1:cl$=CHR$(27)+"E"+CHR$(27)+"H":PRINT cl$;"DECISION MAKER":PRINT          1BB9
20 INPUT "How many options are there to decide from";a:DIM o$(a), o(a)                    19ED
30 PRINT:PRINT"Name them:":FOR x=1 TO a:PRINT ,x;:INPUT o$(x):o(x)=0:NEXT x              1D8C
40 FOR x=1 TO a:PRINT cl$;"How many factors influence the decision to ";o$(x);:INPUT b   2157
50 PRINT:PRINT "Name them:":FOR y=1 TO b:PRINT ,y;:INPUT f$(y):NEXT y                    189A
60 PRINT cl$;                                                                            046D
70 PRINT "Rate influence factors have on the decision to ";o$(x);" from -10 to 10"       1D2A
80 PRINT:FOR y=1 TO b                                                                    0800
90 PRINT ,y;f$(y);                                                                       056C
100 INPUT r:IF r<-10 OR r>10 THEN PRINT CHR$(27)+"A"+CHR$(27)+"A":GOTO 90                18FF
110 o(x)=o(x)+r:NEXT y:NEXT x                                                            0BBA
120 FOR x=1 TO (a-1):IF o(c)<o(x+1) THEN c=x+1                                           0F88
130 NEXT x:PRINT cl$;"I suggest that you ";o$(c):END                                     133A
```

How to type in a listing

The first thing to do is to load Mallard BASIC. Turn on your PCW and put the copy of the CP/M master disc in drive A.

When the A> prompt appears type BASIC and press [RETURN]. After a few seconds a message about Mallard BASIC will appear on the screen, ending with the prompt 'Ok'.

Type in each line carefully, starting with the line number and ending with [RETURN]. The four figure number codes on the extreme right of each line should *not* be typed – this is for checking purposes as described in the Checker program listing printed in issues 10 and 14.

Be careful not to mix up capital I, lower case l and the digit 1, capital O with the digit 0, colons and semicolons, commas and full stops.

You should always save any listing to disc before running it. to do this type SAVE "PROGRAM" – you can choose any name you like up to eight letters in place of PROGRAM.

When you've finished, type LIST [RETURN] and the whole program will appear on the screen. Check it, and if any lines are wrong correct them with the 'line editor'.

For example, if there is a mistake in line 100 type EDIT 100 [RETURN]. Use the arrow keys and the delete key to correct the line, and press [RETURN] when finished. You can delete a whole line by typing its number and then [RETURN].

To run the program, simply type RUN [RETURN]...

But! It's more than likely that no matter how meticulously you typed in the listing it won't work first time. You may get an error message such as 'Syntax error in 100'. The line number given in any error message may not be exactly where the error is, it is simply where the program got stuck. You may have to look around for the mistake.

You can list out the program to the printer (use LLIST) and check it against the magazine copy.

When you find the mistake use the line editor as described to correct it, re-run the program and keep going until you have got it working. Don't forget to save the final working version to disc!

To leave BASIC and get back to CP/M type SYSTEM [RETURN].

To run the program another day, start up BASIC in the same way, put in the disc with the saved program and type RUN "PROGRAM" (giving the name you saved it under in place of PROGRAM, of course).

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TIP-OFFS

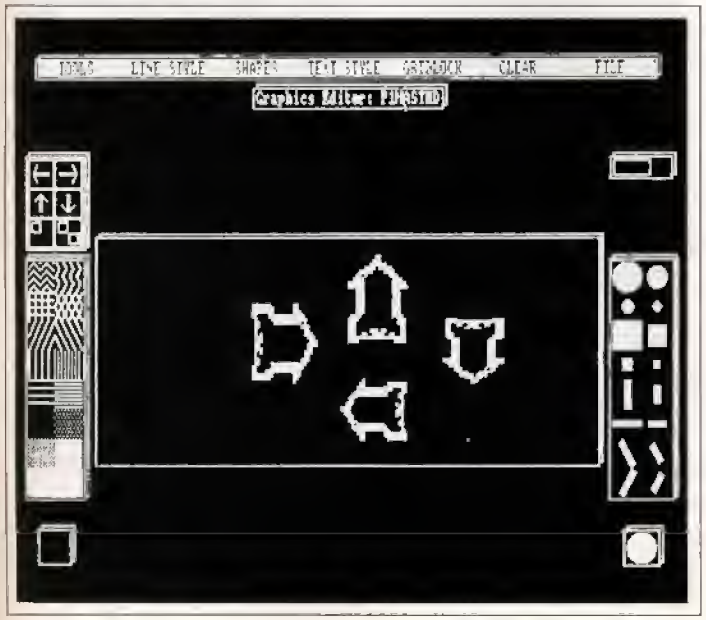
More cool tips than an ocean full of icebergs...

Titanic problems in LocoScript or some other favourite package? Sink them with TipOffs, the pages with hidden depths. The coolest contributions each month win £30 and a twist of lemon. As it's Christmas we're feeling generous and giving two top tip prizes – breaking the ice this time are Wiltshire denizen C P Edwards with his essential advice for all users of The Desktop Publisher, and Avon lady Rose Bilany for her ingenious way to get headline styles from LocoScript.

DTPers do it sideways

One facility lacking in the Desktop Publisher is the ability to rotate graphics. However, it can be done.
1. Enter 'Edit Graphics' and load in the window containing the image to be rotated.
2. Select 'Cut' from the tools menu and create a file of the part of the graphic to be rotated.
3. Abort the edit and then enter 'Edit Font' selecting any font.
4. Using the 'Paste' option fit your image over an even number of letters.
5. Use the 'Save As' option from the file menu to create what is in effect a new font, then exit from the edit font mode.
6. Using a previously created window in the 'Edit Graphics' mode load in your new font via the text style menu then select 'Text' from the tools menu.
7. Move the cursor onto the page and set the size and position of the text letter. By pressing the keys for the letters covered by your drawing you will be able to recreate it.
8. By using the 'Text style' menu UP, DOWN, or LEFT options can be used to paste in the drawing upside down or sideways.

C P Edwards
Colerne, Wilts



Easy Protext italics

One of the few areas in which Protext is more awkward to use than LocoScript is the printer control codes: to get italic, for example, you have to press [ALT]X-I both to switch it on and off, making it easy to forget somewhere and make your entire document come out in italic.

But there is a neat way round this. Assign to the letter I the phrase ↑24↑I↑246↑↑24↑I↑247↑ by typing at the Protext 'a>' prompt

```
KEY I ↑24↑I↑246↑↑24↑I↑247↑
```

(To get the ↑ symbol, type [EXTRA] and semicolon.) What this in fact does is to set up the I key so that when you press [EXTRA]+I Protext inserts an italic code, moves one word backwards and inserts another italic code, then moves a word forwards again. In effect, it is putting italic on and off codes either side of the last word you have typed, leaving the cursor in the right place to carry on typing normally. If you put this command in a file called EXFILE on your Protext startup disc then it'll be done automatically for you whenever you start up.

So, after typing a word, press [EXTRA]+I and the word will be italicised, and you don't have to worry about turning codes off. Obviously the same routine can be used for bold (substituting B for I in the `KEY` command) and underlining (U for I) etc.

An alternative to assigning the phrases to letter keys, where you need to press [EXTRA] plus a key, is to use the function keys.

In Protext, [f5] automatically returns the contents of phrase assigned to key W, and [f7] of phrase X. so by storing the above codes for italics under W rather than I, and bold under X rather than B, you can italicise or embolden a word by one key press, respectively [f5] or [f7] – even faster than LocoScript!

Ian Goodhart
Stanmore, Middlesex

Editing RPED

Many people like to redefine their function keys with a SETKEYS file to produce the commands they use regularly at a stroke. Unfortunately the text editor RPED uses the same function keys, so that if you run SETKEYS you can't then use RPED, as the f-keys are now redefined.

However RPED can be made to use the 1, 2, and 3 keys instead.

First make a listable copy of RPED as in this month's Desert Island Tipoff number 8. Load RPED and use EDIT to change line 13 so that:

```
CHR$(26) becomes "1"
CHR$(17) becomes "2"
CHR$(19) becomes "3"
```

Then change line 16 so that

```
"£5" becomes "3"
"£3" becomes "2"
"£1" becomes "1"
```

Save the new program as "RPED2" – it works exactly the same as RPED but using 1, 2 and 3 instead of the function keys.

Richard Hood
Chessington, Surrey

Saving grace

When typing in BASIC listings, or developing a program, many runs and re-runs are often necessary before all the typing and programming errors are fixed – and if you forget to save the corrected versions, it can be infuriating to have to type out the corrections again. A time-saving trick is to make the program automatically save itself so you don't have to remember to do it. Suppose the program you are working on is called SAM.BAS, then make its first line read:

```
1 SAVE "SAM.BAS
```

or whatever the name of the program is. As you develop the program (or gradually weed out the bugs), every time the program is run, the latest version will be saved. You can edit out the line from the final version.

J D Briggs
Scawthorpe, Doncaster

LocoScript address book

One method for storing frequently used addresses in LocoScript is to set up a special group named 'Address' on your start-of-day disc and create a TEMPLATE.STD in that group. You should then type in your list of names and addresses into this template file with an 'end of page' indicator ([ALT]+[RETURN]) at the end of each address.

The clever thing is that all TEMPLATE.STD files on your start-of-day disc are automatically copied onto the M drive each time LocoScript starts up. So, by having all your addresses in a TEMPLATE.STD the address file will always be available in the M drive. Since the addresses are one to a page, they will have their own separate page numbers. For your own convenience you can keep an index on page 1 and print out a sheet with all the page numbers, then use the [PAGE] key or 'Go to page' command in LocoScript 2 to get to the one you want.

To print an address on an envelope you can just select the TEMPLATE.STD from the 'Address' group in M drive. Press P for Print and select 'Print some pages' then choose the page number of the required address from the menu. Alternatively you can edit it, find the address, copy the address to a phrase, 'abandon edit', and then moving back to your document, just paste it in at the appropriate place.

G L Warner
Pluckley, Kent

Bigger LocoScript headlines

If you think that LocoScript's maximum letter thickness of double 10-pitch bold isn't eye-catching enough for your LocoScripted newsletter headlines, you can go much further.

The trick is to use zero line spacing to overprint the same bold headline two or more times on top of itself. By putting a space of different pitch in front of each line, each line is slightly displaced from each other, resulting in a very thick bold effect.

For example,

```
(+Pitch15) (+LS0)
(+Bold)(+Pitch10D)THE
TITLE(-Bold)(-Pitch)(-LS)
```

will print out the exciting headline 'THE TITLE' in 10 pitch double width 'superbold' type.

If you want a superbold headline centred properly when using LocoScript's Centre command, you should put a matching extra space of 17-pitch at the end of each line.

By displacing two non-bold headlines far apart you can get some other interesting effects too, like a stencilled or outline effect.

Rose Bilany
Bath

Pope to visit Wetwang

KEN POPE, President of the Driffield Model Railway Club, is to visit Wetwang next March. His talk at Wetwang Village Hall will be entitled "Karl Marx and motive power".

Dashing characters

To show that anything LocoScript can do, Protext can do too, here's the equivalent to the making a long dash (as opposed to a hyphen) in LocoScript 1, which was done by storing (+Pitch10D)-(-Pitch) as a phrase.

The trick is to redefine one of the spare ASCII codes (say 186) to produce a single-width dash. You can then define a phrase (say [EXTRA]+D) to be two of these one after the other.

First include the following two commands in your EXFILE file (so that they are always executed whenever Protext starts):

```
KEY D ↑186↑↑186↑
SYMBOL 186 0 0 0 255 0 0 0 0
```

The SYMBOL command redefines the screen appearance of the character produced for the ASCII code 186. However, you also have to alter the *printer* version of character 186, which you do with the SETPRINT utility:

At Protext's a> prompt, type SETPRINT, select option 4 for 'Set character translations', press [TAB], move the cursor over 186, press [ENTER], and type:

```
27 76 12 0 16 16 16 16 16 16
16 16 16 16 16 16
```

(yes, twelve 16s!)

Then press [STOP] twice to get back to the main menu and select option 7 to save the changes in your printer driver. Press [RETURN] to save it as PCW.PTR, as the screen prompt suggests. to To return to PROTEXT choose option 0 from the menu. Make sure than your modified PCW.PTR file is saved on your startup disc as well as the M drive, or you could lose your changes when you turn off.

Though this sounds complicated, the result is simple – just press [EXTRA]+D and your long dash appears. It looks good on screen as well as on printout.

The above system is for the 8000 series dot matrix printer, of course, but it is also possible to achieve the same effect with the 9512.

Use exactly the same KEY and SYMBOL commands, but when you come to the SETPRINT part set up character 186 to be

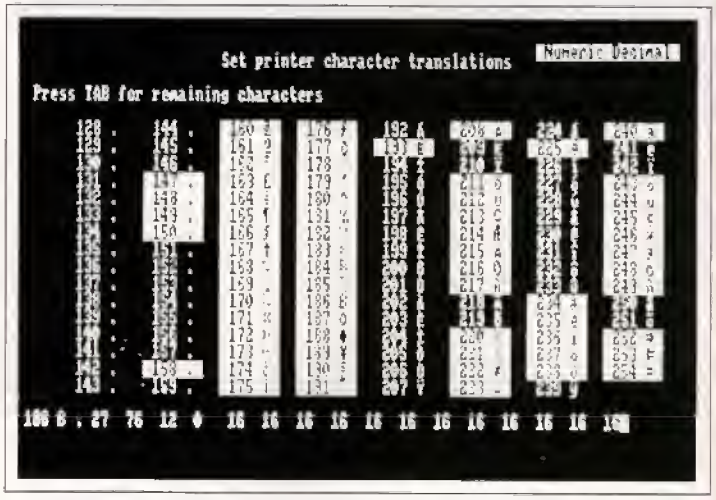
```
27 68 95 27 85
```

which does a half-line space up, an underscore character, then a half-line space down again.

P J Hendricks
London

```
This is a hyphen - and this is a
double hyphen -- but the dash looks
more effective — as you can see

This is a hyphen - and this is a
double hyphen -- but the dash looks
more effective — as you can see
```



Page boy

A quick way to force LocoScript to end a page at a certain point without going through the 'page' menus is to hit [ALT]+[RETURN].

James Roskell
Poulton-le-Fylde, Lancashire

DESERT ISLAND TIPOFFS

You are marooned on a desert island with your PCW. Some programming will help pass the time; you are allowed the BASIC manual and the complete works of Ian Sinclair – but what eight tips would you take with you? For recent BASIC converts, eight old favourites.

1. Randomer number

If you use a program with random numbers in, you will find to your dismay that the sequence of numbers produced by `X=RND(1)` is always the same every time you run the program. However, by including the command `RANDOMIZE (PEEK(65404))` before it you will seed the random number generator with a number from the seconds counter of the computer's clock, making your sequence one of sixty possibilities. They're still only pseudo-random numbers, but a lot less predictable!

2. Renumbering lines

When writing listings it is common practice to label each line as a multiple of ten, meaning if you have to insert a few lines later on then you can, by adding 31 to 36 between 30 and 40, for example. The only problem is that it looks untidy, and you would have no space to squeeze in an extra few lines between 33 and 34 say, so it's better to renumber all the lines to multiples of ten again.

Fortunately the simple command `RENUM` will do this for you in a split second, conveniently renumbering all the lines mentioned in GOTOs and GOSUBs correctly as well. By renumbering and saving constantly you will always have neatly numbered versions of your program on disc.

3. Instant printing

One of the most commonly used commands in BASIC is the PRINT command. To save yourself typing this out over and over again, there is in fact a standard abbreviation – a simple question mark.

Whenever you type a ? in a command, BASIC understands that to mean 'PRINT'. Try typing in the program line `10 ? "Hello";`. When you type LIST, you will see that BASIC has converted it to say `10 PRINT "Hello";`

4. Know your place

Often in a listing it's nice to be able to position text on the screen where you want it without erasing anything already on there. You can do this as follows. Suppose you want to print something in the 34th column and 19th row of the screen; first you need to add 32 to each figure (don't ask why!), getting 66 and 51. Now the BASIC command

```
PRINT CHR$(27)+"Y"
+CHR$(66)+CHR$(51);
"Projected profit is ";
```

will print 'Projected profit is' at column 34, row 19 as you wanted.

If you have a lot of these commands in a program, you can save yourself some typing by defining a 'function' to do it for you. Put somewhere fairly early in your program – say line number 10 – the commands

```
10 DEF FNat$(row%,column%)=
CHR$(27)+"Y"+CHR$(32+row%)
+CHR$(32+column%)
```

and then at any subsequent time you can position the text where you want by commands such as

```
PRINT FNat$(6,3);"Projected
loss is ";
```

which in this case, prints the text in row 6 and column 3.

5. Unprotecting files

If you want to get at a "protected" file (one that says 'improper argument' when you try to list it and won't let you edit it, RPED for example) you can easily do so as follows.

Load BASIC in the normal way (or type `NEW` if already in BASIC) and save the (obviously empty) current program with `SAVE "DUMMY",A` (the 'A' saves the listing in ASCII file format). Then `LOAD "RPED"` or whatever your protected program is. Type `MERGE "DUMMY"` and then `SAVE "RPED"` (or another name if you want to keep the original). Because the file DUMMY.BAS was unprotected, the merging operation has made BASIC forget that RPED was itself protected, so you have just saved a new, unprotected but otherwise identical version of the program.

You can now LIST it, LLIST it, edit it etc. to your heart's content.

6. Creating text windows

You can select a small area of screen and restrict all printing to that area with an 'escape code' command. This leaves all the text on the screen outside that area unaffected. A possible use for this is if you are writing a program where you want to print messages while it runs on a couple of lines of the screen while leaving the rest of the main display unchanged.

To create a window with the top left hand corner at row *r*, column *c*, of height *h* lines and width *w* columns, give this command:

```
PRINT CHR$(27)+"X"
+CHR$(r+32)+CHR$(c+32)
+CHR$(h+31)+CHR$(w+31)
```

From now on any PRINT commands will only use the window area, and any screen scrolling that goes on will only happen in that window too. This window will apply to all printing until you define a new window.

You can set up a 'function' as in tip 4:

```
DEF FNwindow$(row%,column%,
height%,width%)=CHR$(27)+"X"
+CHR$(row%+32)+CHR$(column%+
32)+CHR$(height%+31)
+CHR$(width%+31)
```

and then you can set up a window any time with commands like

```
PRINT FNwindow$(1,5,3,7);
```

which gives a window three lines deep by seven columns wide, the top-left corner being in row 1, column 5. (Remember that numbering starts from zero – the very top left of the screen is row zero, column zero).

To get back to the ordinary full screen, the command would be

```
PRINT FNwindow$(0,0,31,90);
```

assuming you have set up the window function as described.

7. Copy cat

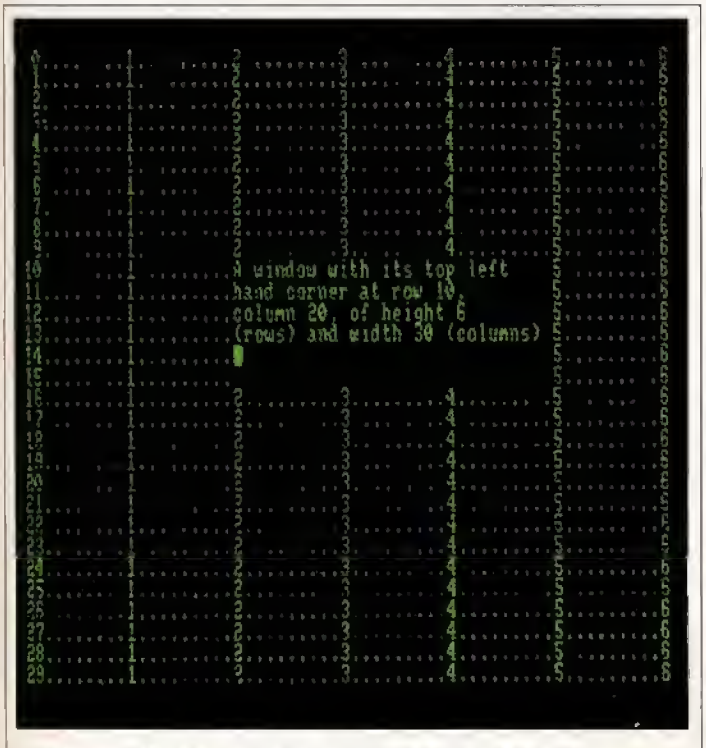
Often when writing a BASIC program you have a number of identical, or nearly identical, lines. You can effectively copy one line to another by using BASIC's EDIT command. Say you need a line 480 which is identical to line 270. Just type `EDIT 270`, move the cursor back with the arrow keys, change the line number to 480, and press [RETURN]. You now have two identical lines numbered 270 and 480. If 480 is to be slightly different, you can then edit it as normal (by `EDIT 480`) to its desired form.

8. Short key cuts

There are a number of handy key presses to remember in BASIC. The [f5] key will pause a program as it is being listed on screen, and [f3] resumes the listing.

The 'cursor left' key copies the previous line. While editing a line, the [FIND] key jumps to the next occurrence of the next letter you type – eg. [FIND]-a jumps to the next letter 'a'. [FIND][FIND] is a quick way to get to the end of a line.

[CUT][CUT] will cut everything between the cursor and the end of the line.



▲ Dividing your screen into text windows; the window in the middle was created by the command `PRINT CHR$(27)+"X"+CHR$(42)+CHR$(52)+CHR$(43)+CHR$(61)`. The output of all PRINT commands will be restricted to this area.

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The disc also contains a Locoscript file of hints and tips, gained through much use of the package, as well as clear instructions on how to use the Texture Fonts and Borders.

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58, The Shrublands, Horsford, Norwich, Norfolk, NR10 3EL.

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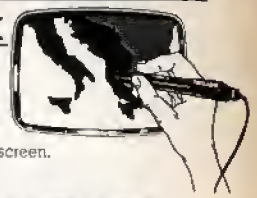

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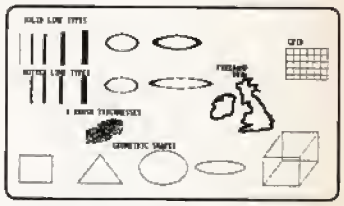

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THE GOOD·SOFTWARE FILE

These pages provide a guide to the best software around for the Amstrad PCW. Published in three monthly parts, this time it's the turn of Spreadsheets, Games and Graphics. We've tested every piece of software we could, to give you enough information to decide which program is the one for you. Except where indicated, all programs should run on both 8000s and the 9512.

The selection isn't comprehensive, but the software listed here represents what we think is the best of that currently available. As well as a brief summary of what they do, there are the main Plus and Minus points for each program - Pluses have a □ by them, Minuses a ▫. Those we think are particularly noteworthy have a corner flash – have fun window shopping!

SPREADSHEETS

If a database replaces an address book, then a spreadsheet replaces the back of an old envelope. It is really an electronic piece of paper which allows you to jot down numbers, juggle them around and analyse the cost benefits of a situation. Vital for businesses, spreadsheets can be useful to home users too: if you want a bank loan you will find that showing your bank manager a spreadsheet printout of your living expenses answers a lot of questions!

A typical spreadsheet has a grid of rows and columns. This grid forms a screenful of cells identified by their column and row numbers, e.g. A3, K36 etc. Each cell can contain a simple number, some text to make the page easier to read, or a formula telling the spreadsheet to work out a number using values from elsewhere. The power of spreadsheets is in this last category, formulae. You can make a cell's value depend on the value of cells above it, or to the left of it, and this value is then automatically updated if you make any changes to the other cells.

So how do you choose between the various spreadsheets? One difference is sheet size, i.e. the number of cells you are allowed to work with. You'll need a few hundred for home use, and 1000 or more for business use. Another area is the range of formulae that you can use – all spreadsheets allow simple column and row totalling, but with some you can get complex statistical analyses too. As with all software, think very carefully what you will need before choosing.

ScratchPad Plus

£59.99 • Caxton • 01-251 9494

If you want a traditional spreadsheet, ScratchPad Plus has most of the features you could want and more. Using "virtual memory" means you can have a huge data area, and the screen can be divided into windows to view different parts at the same time. Many of the commands bear a remarkable similarity to the big business spreadsheet Lotus 1-2-3.

PLUSES - MINUSES

- Virtual memory means you can have large spreadsheets
- Multiple windows mean you can see all the parts you want at once
- Good control over formatting
- Vast range of calculations possible
- ✱ Documentation sorely needs an index
- ✱ Screen prompts are cryptic: you need the manual to hand
- ✱ No provision for automatic execution from files
- ✱ No graphical output facilities

Cracker 2

Boffins' best buy

£49.00 • Software Tech Newstar • 0277 220573

A spreadsheet designed with advanced calculating power firmly in mind, including statistical functions. The screen layout is totally defined by the user, and cell value calculations can almost be full programs, e.g DO ... WHILE. It might prove too complex if all you want is simple spreadsheet operations. The screen messages are very helpful though.

PLUSES - MINUSES

- Can cope with very complex formulae
- □ Flexible screen format defined by the user
- □ On-screen prompts are very clear
- Graphs/charts can be automatically produced
- ✱ Documentation is large, but obscure and confusing
- ✱ You've got to do a lot of work just to get started
- ✱ Very complex for quick, simple applications
- ✱ Needs some programming skills to get the most out of it
- ✱ Free workspace is on the small side (17K) although memory is used efficiently

SuperCalc 2

Best seller!

£49.95 • Amsoft/Sorcim • 091-567 3395

The best selling spreadsheet, officially endorsed by Amstrad. SuperCalc 2 is broadly similar to ScratchPad Plus, and at least as effective, but it has a smaller workspace and is less flexible about the allowed spreadsheet dimensions. One big bonus is that you can store sequences of commands in files for repetitive calculations.

PLUSES • MINUSES

- □ Excellent manual – sections for beginners and experts.
- □ Sequences of commands can be stored and later run
- □ "Data Interchanger" allows you to transfer spreadsheet data to other applications
- Comprehensive range of calculation functions available
- Screen can be split into 2 windows
- ✱ Spreadsheet is limited by memory size
- ✱ No graphical output facilities

First Calc

Good value!

£29.95 • Minerva Systems • 0392 37756

Touted as a quick and simple to use program for the beginner, this is nevertheless quite a powerful spreadsheet, with a large capacity, the ability to replicate formulae, export etc. Really it's not vastly more user-friendly than the rest but a good value package all the same.

PLUSES - MINUSES

- A lot of program for the money
- Good tutorials with demo files
- Simple to use but reasonably sophisticated
- ✱ Not much easier to use than more powerful packages

Rotate

£24.95 • Proteus Computing • 01-748 2302

Rotate is a simple utility program to print out text files rotated through 90 degrees on the paper. This gives you more columns per page which will be needed for some programs, like large spreadsheets.

PLUSES - MINUSES

- Simple menu-driven program does just what it says
- Choice of four print fonts, which can be used to print unrotated files too
- ✱ The quality is nothing like NLQ (e.g. the ordinary "high quality" print option)
- ✱ Only prints plain text, no subscripts, underlining etc.
- ✱ No specific support for non-Amstrad printers

THE GOOD SOFTWARE FILE

SPREADSHEETS • GRAPHICS

Job Estimating • Product Costing
£49.95 each • Cornix Software • 0462 682989

Both these programs aim to provide help to small businesses by keeping track of costs. You break down the job/product you are doing into small units and specify the cost of each basic component. The programs then analyse your profit margins and can produce printed quotes to convince customers you are superb value.

PLUSES • MINUSES

- Well written manual aimed at businessmen not programmers
- Simple and robust to use
- Changes in material cost instantly reflected in all quotes
- Job Estimating page headers make a neat way of doing on-the-spot quotes
- Can't add new components to a description after it has been set up
- Cost of one component can't be dependent on another
- Inflexible design of printed quotes might be inconvenient
- Generally only suited to smallish businesses

Landscape
£19.95 • Systembuild • 0778 344388

This is a utility to print out ASCII files rotated on the printer page, so as to make full use of the extra page width. It provides page dimensions of up to 255x96 characters, in a fairly condensed typeface. Runs as a BASIC program.

PLUSES • MINUSES

- Readable, condensed draft quality typeface
- Simple and effective to use
- It's an undesirable hassle to have to run the program from BASIC
- It's simple, but really needs more than its 200 words of documentation.

Pocket CalcStar — *Good value!*
£39.95 • Davis Rubin Associates • 0386 841181

A fairly traditional spreadsheet but with a few surprising features. It's not particularly large or fast, but is attractively priced and has all the basic functions. Can form part of an integrated system with the other Pocket products. A safe buy for the first- time user, and the documentation is up to the usual high MicroPro standards.

PLUSES • MINUSES

- Good range of mathematical calculation functions.
- Good documentation – sections for beginners and reference.
- You can preset a course of cells to visit, for form filling.
- Can be integrated with other Pocket products, eg ReportStar
- Screen size is very small – at most 15 spreadsheet rows, and normally only 10.
- No auto-recalculate facility

Multiplan
£69.99 • MicroSoft/NewStar • 0277 220573

A well established package with all the features you would expect of a reasonable spreadsheet — it just lacks that something extra that recommends some of the newer ones. No support for command reading from files, or for "virtual memory". Adequate, but there are better for the money. And the manual can kill at twenty paces!

PLUSES • MINUSES

- Functions easily entered by menu selection
- Full range of features and functions
- On-screen help text is available as you go
- Sheets can be interlinked and data transferred between them
- You need a computer science degree to read the manual
- No support for automatic execution
- Workspace is limited by CP/M memory space
- Printer output a bit cumbersome

Video Digitiser
£99.95 • Electric Studio • 0462 420222

A black box which plugs onto the expansion port at the back of the PCW, into which you put a video camera or video recorder. It will then 'digitise' the picture it receives and display it on the screen. You can fine tune the thresholds for ideal contrast, and print it out to the PCW printer. Pictures can be saved and edited with the Electric Studio light pen or mouse. Nice, but expensive by the time you've bought a light pen/mouse too.

PLUSES • MINUSES

- Automatically picks a good contrast level for the display
- Can store pictures for the Light Pen or Mouse to work on later
- Simple to set up
- Range of different operating styles for high quality
- Can print out on a full A4 page
- Can't take simple TV signals – video only
- Manual doesn't tell you how to manually tune the thresholds

VIDI PCW
£99.95 • Rombo Productions • 0506 39046

A very similar package to the Electric Studio digitiser, not much to choose between the two so it depends on the other packages you have as to which is one to buy. Rombo's works with the Fleet Street Editor, Electric Studio's with Newsdesk International. Can make small changes to your digitised picture pixel-by-pixel, though it's fiddly, and can insert text in a variety of fonts and sizes.

PLUSES • MINUSES

- Text can be inserted from within the program
- 16 levels of shading
- Can print images to screen in defined order and time apart – great for presentations
- Facility for pixel by pixel changes
- Unhelpful manual

GRAPHICS

You can use a graphics package to create and store diagrams and drawings on disc, to be amended, adjusted or printed out at will. There are three main types of graphics package: art, technical drawing and graph plotting programs. In art packages the emphasis is on designs and pictures, with freehand drawing facilities, a selection of pretty text fonts and a variety of patterns to fill areas with. Technical drawing packages concentrate on shapes, such as squares and polygons, lines and labels. Finally graph plotters will take your data and turn them into bar charts, pie charts and so on. 9512 owners will have to buy a dot matrix printer to do all this, of course.

DR Draw
£49.95 • Digital Research • 0635 35304

This is a drawing utility, which allows you to compose designs from circles, polygons, lines and a wide veriety of shadings and styles of text. It's very cumbersome to use unless you also have a light pen or a mouse, and overall not very friendly. Not really to be recommended unless you're ready for some hard work.

PLUSES • MINUSES

- When pushed, it can produce very neat diagrams, even on the standard PCW printer
- Good, professional manual (although no mention of Amstrad specifics)
- You need CP/M expertise to get it installed and going
- Painfully slow screen handling
- Difficult to use by keyboard alone – you must buy a lightpen or mouse

DR Graph
£49.95 • Digital Research • 0635 35304

A rather specialised package, specifically for presenting complex data in graph form. Can produce line graphs, bar charts, piecharts, scatter plots, text, and compositions of any mixture of these. Very flexible, and easily operated by menus, but really needs a graph plotter to do it justice.

PLUSES • MINUSES

- Can read data from certain spreadsheets (e.g.SuperCalc)
- Extensive annotation and text placing is possible
- Good manual (although no mention of Amstrad specifics)
- Supports a colour graph plotter as an output device
- You need CP/M expertise to get it installed and going
- There is no way of joining points by a smoothed curve

Master Paint
£19.95 • Database Software• 0525 878888.

A WIMP environment graphics package (windows, icons , menus, and pointer) which will run with Kempston, AMX or Electric Studio mice. Usual facilities for drawing curved or striahgt lines, polygons, boxes, circles and ellipses, and a host of 'fill' patters. 'Undo' function and eraser facility, plus the ability to zoom in on a part of the picture and make pixel-by-pixel changes.

PLUSES • MINUSES

- WIMP environment makes it easy to use
- Zoom function lets you fine-tune your pictures
- Good range of effects
- Undo and erase facilities
- Text fonts are boring
- Can't move large blocks with the copy function

Art with Lightpen or Mouse — *Great fun!*
£79.95 or £129.95 • Electric Studio • 0462 420222

Ostensibly you are buying a piece of hardware — a light pen, or a mouse, that can be used with many PCW graphics programs, like DR Draw. In practice, its main use is with the software that comes with it, a very good picture drawing package. You can freehand draw, get airbrush effects, create polygons and circles, and move blocks of pixels. Great fun.

PLUSES • MINUSES

- Light pen hardware is a simple module that slots onto the back of the PCW
- You can draw by freehand pen control or with cursor keys for accuracy
- Menu selections are easy to understand
- Full range of functions for area filling, shading and spraying
- Blocks of pixels can be moved and copied
- You would need to know your way around CP/M to use the lightpen itself with other graphics programs
- Items on the screen are purely pixels, not distinct elements like in DR Draw or Microdraft
- No positioning of items by numeric co-ordinates for accuracy.

Master Scan — *Unique!*
£69.95 • Database Software• 0525 878888.

A device which clips on to your printer head and scans pictures, sending the digitised result to disc. You can then use the pictures in desktop publications or in other graphics packages, such as Master Paint. Great for newlsetter production but the claims for Master Scan as a low-cost fax machine are rather grandiose – the quality of scanned text is poor. Only works with the 8000 series printers, so no good for 9512 owners.

PLUSES • MINUSES

- Simple method of getting good digitised graphics
- Suitable for all desktop publishing programs
- Contrast control useful
- Quality of scanned text is bad – no good for faxes
- Problems with illustrations containing lots of grey

Graphics Operating System
£69.95 • Mirrorsoft • 01-377 4645

This is a library of machine code routines for programmers to use. It is essentially the guts behind Fleet Street Editor Plus, and provides you with a set of routines to draw menus, read a mouse, fill areas and so on.

PLUSES • MINUSES

- Good range of general purpose graphics functions
- Routines can be called form most programing languages
- Functions to drive mice and menus are provided
- 'Fill' command can be undone
- Consistently designed and documented calling mechanisms
- Manual is weak on tutorial content
- Only leaves you with 17k of workspace in BASIC
- 'Fill' command is slow
- Lots of PEEKs and POKEs make it longwinded
- Priced for company programmers not home users

Graphics and Everything — *Great for hackers!*
£19.95 • CP Software • 099382 3463

The full title is 'All you ever wanted to know about graphics, the universe and everything on PCW 8256/8512 ... but were afraid to ask.' Phew. A wide range of little programs to do graphic things on the PCW like smooth scrolling, defining windows, moving sprites around. The programs are written in assembler, with the source code provided if you want to see how to program them for yourself. Great for programmers.

PLUSES • MINUSES

- Wide range of useful functions
- Code can be used from BASIC, machine code, or any language
- The assembler source code is supplied
- Inexpensive
- Good manual
- A bit long-winded to use from BASIC
- No way of loading just the routines you want

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PCW Business & Games list available on request. (Please write enclosing S.A.E.)

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* * QUASAR II * *

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QUASAR is used by numerous British Universities, Colleges and Hospitals for research, as well as by people in Spain, Portugal, Sweden, Malta, Nigeria, Netherlands and Holland.

Putting Your Amstrad to work July 1987. *"It is invaluable for those who are interested in or need to use statistical packages."*

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THE GOOD SOFTWARE FILE

GRAPHICS • GAMES

ExBasic — *Great fun!*
£11.45 • Nabitchi Computing • 051-708 8775

A utility program which augments Mallard BASIC's commands, allowing you to use quite sophisticated graphics functions. You can draw or erase lines, circles or dots, save and load screenfuls of data, pause, beep ... all with commands like PRINT "¡DRAW.";100;200;. – no machine code or POKEs!

PLUSES • MINUSES
- ☐ All functions done by simple BASIC PRINT statements
- ☐ No machine code knowledge needed
- ☐ Good range of simple drawing commands available
- ☐ Can save and load images once you've got them right
- ☐ Very cheap!
- ※ Not quite fast enough for proper animations/games programs

Microdraft — *For specialists!*
£79.95 • Timatic Systems Ltd •0329 236727

This package is essentially an electronic drafting board. Lines, circles, polygons, text and so on can be accurately placed on a page, and then scaled and rotated en masse. Overall a powerful package, comprehensively designed. A lot of niggles though, like not being able to rotate text, not being able to undo mistakes at all easily, and hassle with print formats.

PLUSES • MINUSES
- ☐ Elements can be positioned very accurately
- ☐ Good, comprehensive manual (but refers to CPC keyboard!)
- ☐ Supports output on proper graphic plotters
- ※ Mistakes very difficult to undo
- ※ Rotation facilities weak, and you can't rotate text at all
- ※ Menu structure can be very involved
- ※ Printing any format other than A4 'landscape' is impossible

Grafpad with Powercad — *Powerful!*
£149.50 • Grafsales • 0923 43942

A system allowing both freehand and technical design via a special pen. This works from a 'digitising tablet' which takes over the functions of the keyboard and fits into the expansion port at the back of the PCW. Wide range of features including object move, ability to define symbols for future use and sophisticated zoom feature for fine adjustments. Its potential is enormous though at the price may be limited to specialist drawing office applications.

PLUSES • MINUSES
- ☐ Combines best of freehand and technical drawing facilities
- ☐ Zoom feature allows drawing in of fine details
- ☐ Accurate
- ☐ Sophisticated, professional package
- ※ Expensive – not really meant for the private user

Distractions — *Good value!*
£19.95 • Design Design • 8000s only

Three futuristic arcade-type games in one combine to form a basic but good value disc. Available from 2, South Block, Riverside Way, Sawbridgeworth.

GRAPHICS ■■■■※
ADDICTIVENESS ■■■※※
LASTING APPEAL ■■■※※
VALUE VERDICT ■■■■※

Fairlight
£14.95 • The Edge (01-831 1801) • All PCWs

Fine 3-D graphic adventure with similar screen display to Batman. You explore a castle prison, battle with numerous enemies and solve puzzles.

GRAPHICS ■■■■※
ADDICTIVENESS ■■■※※
LASTING APPEAL ■■■■※
VALUE VERDICT ■■■■※

The Fourth Protocol — *Sinister but fun!*
£15.99 • Ariolasoft (01-386 3411) • All PCWs

An icon-driven adventure that works superbly well. Stop the Russians from setting off a nuclear device in the UK. Three excellent games on the one disc.

ATMOSPHERE ■■■■※
INTERACTION ■■■■※
CHALLENGE ■■■■※
VALUE VERDICT ■■■■■

GAMES

The entertainment software available divides into two main categories:

"Adventures" are the most common on the PCW. These are games controlled by typed keyboard commands. The programs describe a scenario and you, the player have to respond by typing things like: *get sword* or *polish orb with velvet cloth*. They vary greatly in their ability to recognise and respond to your instructions, and at best seem unbelievably intelligent. Some include pictures of the various game locations, but these play little part in actual game-play. We rate these by Atmosphere, Interaction, Challenge and Value.

In "Arcade games", an animated character is moved onscreen by direct keyboard (or joystick) control. You press a key for 'Left' and the character goes left or shoots something. We rate these by Graphics, Addictiveness, Lasting Appeal and Value.

Brian Clough's Football Fortunes
£17.95 • CDS (0302 21134) • All PCWs

A cross between Monopoly and Football Manager, combining board and PCW. Go for league and cup success – but keep the bank manager happy too!

GRAPHICS ■■※※※
ADDICTIVENESS ■■■■※
LASTING APPEAL ■■■■※
VALUE VERDICT ■■■■※

Bridge Player 2000
£19.95 • CP Software (099382 3463) • All PCWs

A few of the bids it makes seem a little strange, but as bridge programs on computers go this is pretty good. Claims not to cheat, even though it deals!

GRAPHICS ■■■※※
ADDICTIVENESS ■■■※※
LASTING APPEAL ■■■■※
VALUE VERDICT ■■■※※

Batman — *Great fun*
£14.95 • Ocean (061-832 6633) • 8000s only

3-D animated graphics as you guide Batman around Gotham City, looking for hidden parts of the Batcraft. Good range of hazards, and even a tune!

GRAPHICS ■■■■■
ADDICTIVENESS ■■■■■
LASTING APPEAL ■■■■※
VALUE VERDICT ■■■■■

3D Clock Chess
£15.95 • CP Software (099382 3463) • All PCWs

The '3D' refers to a three dimensional display of a chess clock on the screen. Pretty, but a bit of a gimmick. You can set time limits for moves.

GRAPHICS ■■■■※
ADDICTIVENESS ■■■※※
LASTING APPEAL ■■■■※
VALUE VERDICT ■■■※※

Graham Gooch's Test Cricket
£19.95 • Audiogenic (0734 303663) • All PCWs

A good cricket match simulation with animated graphics. You can select your own teams, control the speed of bowling and striking. For cricket fans.

GRAPHICS ■■■■※
ADDICTIVENESS ■■■※※
LASTING APPEAL ■■■※※
VALUE VERDICT ■■■※※

Blackstar
£14.95 • CRL (01-533 2918) • All PCWs

A traditional text adventure with large playing area. You explore Castle Blackstar and its mysterious caverns in search of a power orb.

ATMOSPHERE ■■■■※
INTERACTION ■■※※※
CHALLENGE ■■■■※
VALUE VERDICT ■■■■※

Colossus Chess 4.0
£15.95 • CDS Software (0302 21134) • All PCWs

A very strong chess game which manages to use the time which you spend thinking to plan its strategy. Bags of features, including blindfold games.

GRAPHICS ■■■※※
ADDICTIVENESS ■■■※※
LASTING APPEAL ■■■■※
VALUE VERDICT ■■■※※

Gnome Ranger
£14.95 • Level 9 (0344 487597) • All PCWs

Idiosyncratic but enjoyable game where you follow the intrepid gnome Ingrid Bottomlow through a fairy tale landscape full of compelling puzzles.

ATMOSPHERE ■■■※※
INTERACTION ■■■※※
CHALLENGE ■■■※※
VALUE VERDICT ■■■■※

Guardian and Blagger
£14.95 • Alligata (0742 755796) • 8000s only

A two-game package giving the lighter side of game playing. Blagger is a platform burglar game, while Guardian is a classic space shoot-'em-up.

GRAPHICS ■■※※※
ADDICTIVENESS ■■■※※
LASTING APPEAL ■■※※※
VALUE VERDICT ■■■※※

Guild of Thieves — *Sophisticated*
£24.95 • Rainbird (01-240 8838) • All PCWs

To join the select Guild of Thieves in Kerovnia, you first have to show your worth by fleecing an island of all its treasures. An excellent adventure!

ATMOSPHERE ■■■■■
INTERACTION ■■■■※
CHALLENGE ■■■■※
VALUE VERDICT ■■■■■

Bounder — *Full of bounce!*
£13.95 • Gremlin (0742 753423) • 8000s only

A graphics bouncing-ball game. You have to direct the ball over a treacherous network of squares & hexagons. Persevere – or use the cheat mode!

GRAPHICS ■■■■※
ADDICTIVENESS ■■■※※
LASTING APPEAL ■■■※※
VALUE VERDICT ■■■■※

Cyrus II Chess — *Great graphics!*
£15.95 • Amsoft (091-567 3395) • All PCWs

Chess game with a stunningly detailed 3-D display. The play is quite strong, with several handy features like allowing you to take back a move.

GRAPHICS ■■■■■
ADDICTIVENESS ■■■■※
LASTING APPEAL ■■■■※
VALUE VERDICT ■■■■※

Head Over Heels — *Superlative!*
£14.95 • Ocean (061-832 6633) • 8000s only

A superlative, compulsive 3D arcade adventure where you control either Head or Heels. Escape from Castle Blacktooth and free the Empire's enslaved planets.

GRAPHICS ■■■■■
ADDICTIVENESS ■■■■■
LASTING APPEAL ■■■■■
VALUE VERDICT ■■■■■

THE GOOD SOFTWARE FILE

GAMES

Heathrow ATC/Southern Belle
£16.95 • Hewson • All PCWs

Realistic simulations – one as the Traffic Controller of the airport, the other on the footplate of a steam train. From 56b Milton Trading Estate, Abingdon, Oxford

GRAPHICS ■■■■■
ADDICTIVENESS ■■■■■
LASTING APPEAL ■■■■■
VALUE VERDICT ■■■■■

Hitch-Hikers' Guide *Hilarious! Superb!*
£24.95 • Activision (01-431 1101/2992) • All PCWs

In many people's minds, the best adventure program ever written. Based on Douglas Adams' series, it is ingenious, hilarious and mind-boggling. A must!

ATMOSPHERE ■■■■■
INTERACTION ■■■■■
CHALLENGE ■■■■■
VALUE VERDICT ■■■■■

Hollywood Hijinx
£24.95 • Activision (01-431 1101/2992) • All PCWs

A good skit on Hollywood and its conventions. Find ten treasures hidden in Aunt Hildegarde's beautiful mansion. Might not suit the British palate.

GRAPHICS ■■■■■
ADDICTIVENESS ■■■■■
LASTING APPEAL ■■■■■
VALUE VERDICT ■■■■■

Leaderboard *For golfers!*
£19.99 • US Gold (021-356 3388) • Withdrawn

A good golf simulation - your shots can be affected by the wind and the slope and the screen shows your view of the hole from where the ball has landed.

GRAPHICS ■■■■■
ADDICTIVENESS ■■■■■
LASTING APPEAL ■■■■■
VALUE VERDICT ■■■■■

Leather Goddesses of Phobos *Bawdy!*
£24.95 • Activision (01-431 1101/2992) • All PCWs

Lascivious, licentious and lewd – definitely not for feminists! An excellent adventure game, spoofing both sci-fi and Soho. With 3D scratch'n'sniff card!

ATMOSPHERE ■■■■■
INTERACTION ■■■■■
CHALLENGE ■■■■■
VALUE VERDICT ■■■■■

Lord of the Rings *Hobbit's Hobby!*
£19.95 • Melbourne Ho. (01-377 8411) • All PCWs

Excellent adaptation of the Tolkien classic. You take the role of Frodo or one of his group, and rove through Middle Earth meeting balrogs, orcs, wargs and all.

ATMOSPHERE ■■■■■
INTERACTION ■■■■■
CHALLENGE ■■■■■
VALUE VERDICT ■■■■■

Lurking Horror
£24.95 • Activision (01-431 1101/2992) • All PCWs

Something nasty is lurking down in the bowels of the George Edwards Institute of Technology – find it before it finds you! Another high standard game from Infocom.

ATMOSPHERE ■■■■■
INTERACTION ■■■■■
CHALLENGE ■■■■■
VALUE VERDICT ■■■■■

Moonmist
£24.95 • Activision (01-431 1101/2992) • All PCWs

An American Tourist's dream, set in a genuine haunted castle in Cornwall. A game which is strong on atmosphere and immensely playable.

ATMOSPHERE ■■■■■
INTERACTION ■■■■■
CHALLENGE ■■■■■
VALUE VERDICT ■■■■■

The Pawn *Sophisticated!*
£24.95 • Rainbird (01-240 8838) • All PCWs

An excellent adventure with 30 superb screen illustrations, zany characters and a host of baffling puzzles. Sure to keep you entranced for hours.

ATMOSPHERE ■■■■■
INTERACTION ■■■■■
CHALLENGE ■■■■■
VALUE VERDICT ■■■■■

Scrabble *Plays a mean game*
£19.95 • Virgin Leisure (01-727 8070) • 8000s only

Excellent implementation of the famous game. 1 to 4 people can play the computer, which knows a fair few obscure words. Good graphical display.

GRAPHICS ■■■■■
ADDICTIVENESS ■■■■■
LASTING APPEAL ■■■■■
VALUE VERDICT ■■■■■

Silicon Dreams
£19.95 • Rainbird (01-240 8838) • All PCWs

A trilogy of intriguing adventure games. You are secret agent Kim Kimberley saving Snowball 9 from almost certain doom! With a humorous novella.

ATMOSPHERE ■■■■■
INTERACTION ■■■■■
CHALLENGE ■■■■■
VALUE VERDICT ■■■■■

Sorceror
£24.95 • Activision (01-431 1101/2992) • All PCWs

Enter the world of necromancy and sorcery courtesy of Infocom. You have to find out the correct spells which will locate Belboz, your missing master.

ATMOSPHERE ■■■■■
INTERACTION ■■■■■
CHALLENGE ■■■■■
VALUE VERDICT ■■■■■

Starglider *Multi-faceted!*
£24.95 • Rainbird (01-240 8838) • All PCWs

A sophisticated shoot-'em-up with 3D vector graphics and a dose of strategy too. Your task is to save Novenia, helped by a complex playing guide.

GRAPHICS ■■■■■
ADDICTIVENESS ■■■■■
LASTING APPEAL ■■■■■
VALUE VERDICT ■■■■■

Stationfall
£24.95 • Activision (01-431 1101/2992) • All PCWs

Sequel to Planetfall. You explore a space station with your chums Floyd and the philosophical robot Plato. A great sci-fi adventure, a mix of 2001 and Star Trek!

ATMOSPHERE ■■■■■
INTERACTION ■■■■■
CHALLENGE ■■■■■
VALUE VERDICT ■■■■■

Steve Davis Snooker
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Surprisingly realistic simulation of both pool and snooker games. Allows for spin, side, strength of shot. Good value, despite all the balls being greens!

GRAPHICS ■■■■■
ADDICTIVENESS ■■■■■
LASTING APPEAL ■■■■■
VALUE VERDICT ■■■■■

Strike Force Harrier
£19.95 • Mirrorsoft (01-377 4645) • All PCWs

A combat simulation of a Hawker Harrier, designed in conjunction with British Aerospace. Highly detailed, and you'll need a few hours with the manual.

GRAPHICS ■■■■■
ADDICTIVENESS ■■■■■
LASTING APPEAL ■■■■■
VALUE VERDICT ■■■■■

Tau Ceti *Action and adventure*
£19.95 • CRL (01-533 2918) • All PCWs

A superb game combining graphics, adventure, brainpower and shoot-'em-up. Your task is to sabotage Tau Ceti III's main reactor.

GRAPHICS ■■■■■
ADDICTIVENESS ■■■■■
LASTING APPEAL ■■■■■
VALUE VERDICT ■■■■■

Tomahawk *Dynamic!*
£19.95 • Digital Int. (0276 684959) • 8000s only

A sophisticated Apache helicopter flight simulator. Impressive cockpit view graphics as you engage in combat missions - can be used with a joystick too.

GRAPHICS ■■■■■
ADDICTIVENESS ■■■■■
LASTING APPEAL ■■■■■
VALUE VERDICT ■■■■■

Trivial Pursuit
£19.95 • Domark (01-947 5624) • 8000s only

A computer version of the yuppie board game, new questions, good graphics and even tunes! Even so, you might prefer the board version.

GRAPHICS ■■■■■
ADDICTIVENESS ■■■■■
LASTING APPEAL ■■■■■
VALUE VERDICT ■■■■■

Very Big Cave Adventure *Irreverent!*
£14.95 • CRL (01-533 2918) • All PCWs

An adventure spoof with plenty of corny jokes, like the credulous bull who guards a gully – the Gully Bull. Nice break from serious adventuring.

ATMOSPHERE ■■■■■
INTERACTION ■■■■■
CHALLENGE ■■■■■
VALUE VERDICT ■■■■■

NEXT MONTH

The guide continues with WORD PROCESSORS, (inc. spell checkers and mail mergers) DESKTOP PUBLISHERS, UTILITIES and ACCOUNTS/PAYROLLS. The month after will cover DATABASES, EDUCATIONAL and PROGRAMMING software, and after *that* it's back to this month's topics.

We intend to keep publishing the three parts of the guide in rotation, updating it each month to include all new products. If you would like to see other sections of the guide, back issues of 8000 Plus are available from our Somerton address at £1.75 each.

Meanwhile, if you are aware of any significant errors or omissions, please let us know. We want to maintain it as *the* authoritative guide to PCW software.

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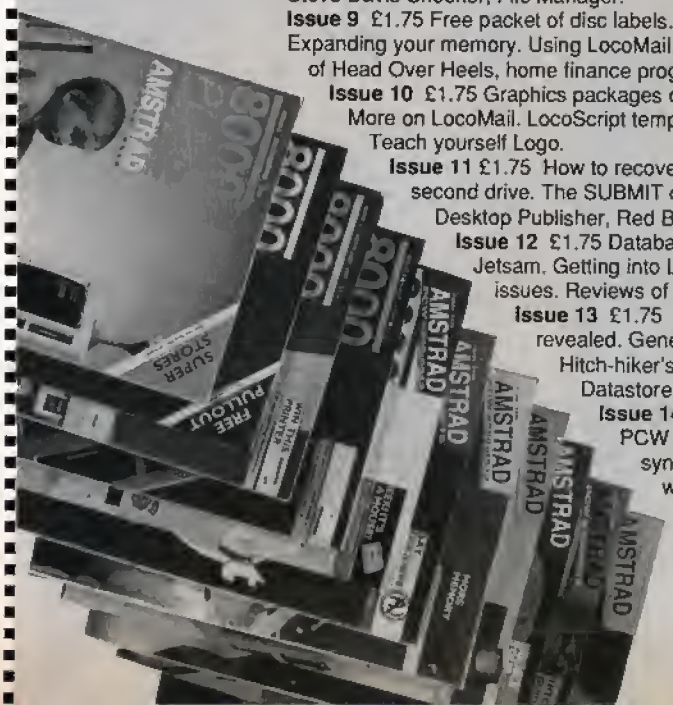

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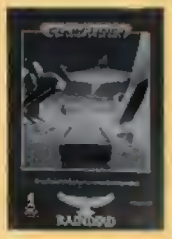

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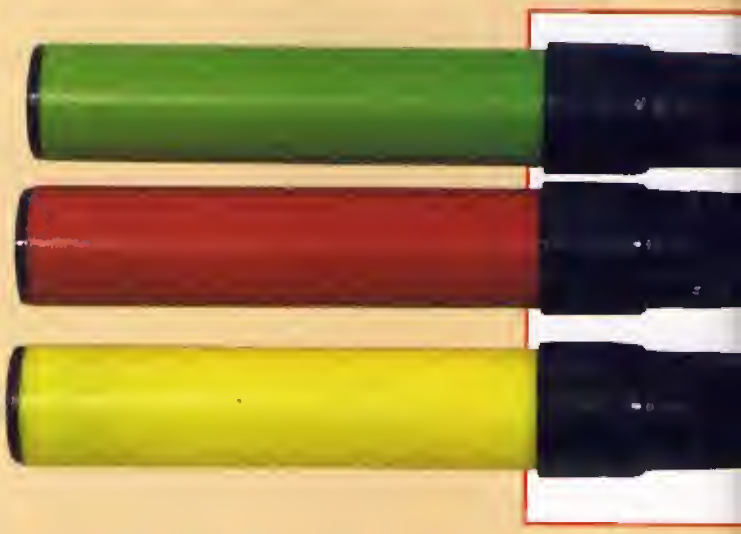

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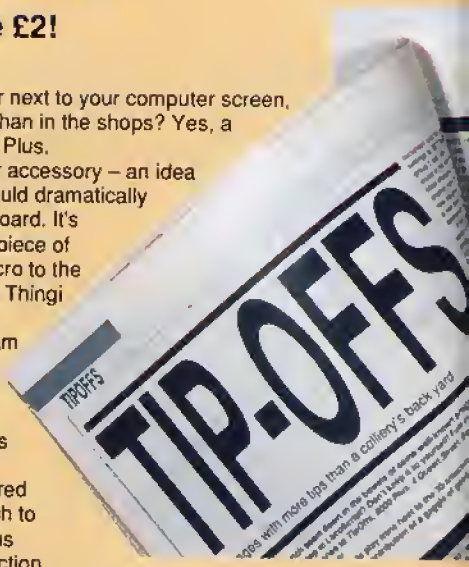

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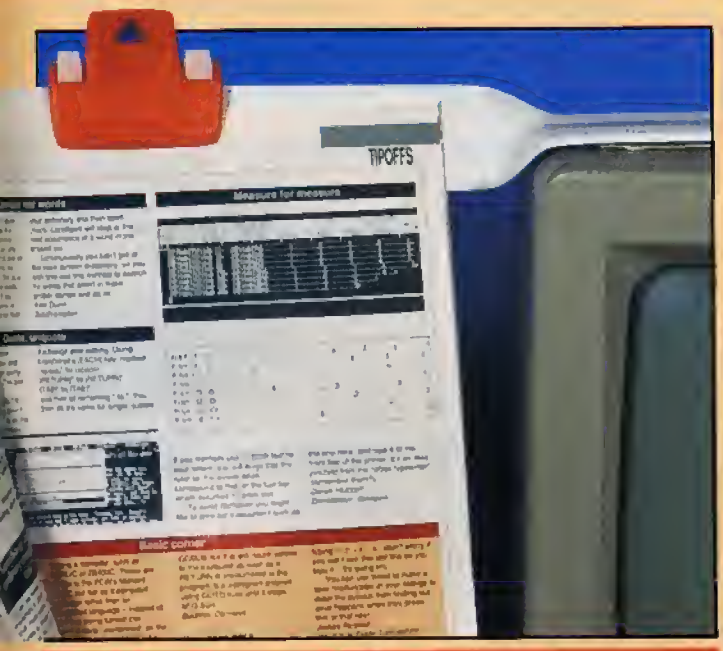

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POSTSCRIPT

A seasonal sprinkling of sentiments scanned, sorted and solved by a serene Ed.

It looks as though you've all voted 8000 Plus the unofficial ombudsman to the software industry – this month's postbag has more than its fair share of gripes at dodgy practices in the marketplace. It's most gratifying that you think we wield some power in this area, but unfortunately there's no magic word to make everything better. If you've got any thoughts, good, bad or irrelevant, send them winging off to *PostScript, 8000 Plus, 4 Queen Street, Bath BA1 1EJ.*

Old tyme virtues

I am not in the habit of writing letters to magazines, especially when, like yours, they are doing a good job without my two bits worth, but won't anyone put in a good word for dear old LocoScript 1? For all that we have been bombarded recently with letters and articles extolling the virtues of LocoScript 2, I remain to be convinced. May I please explain?

You see, in spite of the fact that I was an early buyer of LocoScript 2, as indeed I was of a PCW8256 back in the prehistoric days of mid-1985, this letter is still coming courtesy of Locoscript 1. The point is simply this: I have found LocoScript 2 to be far less of an improvement than it was cracked up to be.

I don't particularly like its new style print, I am irritated at the loss of memory in its M drive and I am too much of a Yorkshireman to spend £25 for a bit of extra memory – 100k was about right for me but my version of LocoScript 2 (v2.03) only offers me 47k. Furthermore, having learned to drive LocoScript 1 I found the totally different command routines of LocoScript 2 to be rather a pain in the neck.

What is even worse is that I now seem to have to insert a disc four times to copy it – much easier to use the original CP/M with DISCKIT.

Finally, is it really necessary for LocoScript 2 to offer so many screen prompts before it will actually *do* anything – especially when starting the printing process? About the only thing I have not been asked is whether I need to go to the loo! And if it tells me again what it is doing rather than actually getting up and doing it, I shall scream. As far as I can see, LocoScript 2's only real virtue is its ability to scroll a longer document more quickly. Of all my discs, I have only two which will run on LocoScript 2. One of them is a long book where fast scrolling is helpful; the other is one of my old discs which I foolishly converted before the true nature of the new beast revealed itself.

Maybe I have got it wrong somewhere and no doubt you clever people down in Bath will compose a suitably witty comment at my reactionary attitude, but seriously, am I totally alone on this planet in my preference for the original system?

David Jenkinson
Knaresborough, N. Yorks.

● *Changing any way of working that you have got used to is always traumatic, and if you find LocoScript 1 easier to get on with then without doubt you ought to carry on using that. I would have thought that most people who have bought LocoScript 2 are pleased with the extra features and have found the extra learning time worthwhile. However, surely you are making life difficult for yourself by using some Loco 1 and some Loco 2 discs? Either make the change or don't, mixing the two systems is bound to cause frustration.*

As to your troubles copying discs, this is another result of the smaller M drive. If you were to invest that £25 in a RAM upgrade you would find your discs being copied in one go.

Hard times

I read with dismay and fury the advertisement in the December issue in which Messrs ASD Engineering offer their 10 Megabyte hard disc at £299, and their 20MB version at about the same price they were asking for the 10MB model previously.

Barely three months ago, I paid, with VAT, £517 for just 10MB of memory! Rapid updating of models, Sugar fashion, does at least increase the choice and improve the product, but I, and presumably many like me, feel that we have been well and truly ripped off by ASD.

On the credit side, after just a few days of use, one came to feel that one would be completely lost without a hard disc. Being engaged in an extensive research project on Third World Hydrology, which involves primarily database and wordprocessor work, I find that having Protext, Cardbox, and all necessary CP/M utilities along with all text and data files on the one disc makes working the system sheer joy. The A and B drives of my 8512 are relegated to boot and backup functions respectively, the hard disc being central to the system, rather than peripheral – sorry about that! I would most earnestly recommend the use of a hard disc to anyone handling large volumes of data, or needing to jump rapidly between programs.

However, I still feel that I have been very ill-used by ASD's marketing and pricing policies. The

Better printing?

The launch of a 24-pin printer, the LQ3500, described in the November issue may hold great promise for PCW desktop publishing, raising the humble PCW to unknown heights. Some top-end of the market 24-pin printers are able to print with a raster definition (dots per inch) of 360, comparable and in excess of most common laser printers. Acceptable camera ready copy from a PCW for direct offset litho? The mind boggles. Can you tell me if the new Amstrad printer is capable of such labours? I have been unable to discover such details as yet.

Robert Landbeck
London SE12

● *The printer itself may or may not be capable of printing the results you describe, but the problem is really with the software. Unless DTP programs include a specific printer driver to take advantage of the high quality, which they don't at present, then you're only going to be able to get text and standard resolution graphics out of the LQ3500.*

Incidentally, we haven't included the LQ3500 in this month's printer reviews because we reckoned that any 8000 owners wanting really high quality print would be better advised to go for a daisywheel rather than another dot matrix, and it costs too much to appeal as a draft printer to 9512 owners.

product can now be regarded as excellent value for money, and will probably sell like the proverbial hot-cakes; but did ASD have to sting in this way their early customers?
D Jacques
Wooton Common, Isle of Wight

● *Our condolences to your wallet. Presumably ASD's manufacturing costs have dropped, so ASD found themselves in a position where dropping the price would increase total sales. Which is the more moral: dropping the price of a product and annoying previous customers, or keeping it artificially high and ripping off new customers? Life is full of these dilemmas. I expect anybody who paid £399 or £499 for an 8256/8512 is pretty peeved at the price drop of those too, but at least you've had a few extra months' use out of it.*

Black is white

On reading your review of Database Software's *MasterScan* (issue 15), I noticed that there was a point that you missed. It is a bug that you come across when using *MasterScan* with other DTP programs and not its sister program, *MasterPaint*..

The problem is that, when you save a 'scan' in *The Desktop Publisher* (ironically made by the same company), you have to go through the rigour of inverting the picture colours, ie. green to black and black to green, to make the picture viewable and printable. The inverting is not difficult to do accurately but it is time consuming and annoying.

Unfortunately, I do not know about the other two formats, namely *Fleet Street Editor* and *Newsdesk International* as I do not own these but, all the same, I would have thought that the programmers for *MasterScan* would have seen and rectified this problem before putting their product on the market.

If there is an easy way round this problem, I would appreciate being told.
Christopher Egan
Christchurch, Dorset

● *Thanks for pointing this out. Most DTP programs have an inverting function so this shouldn't be a problem. Using MasterPaint you can also invert an image and save it for other programs to access, but even if you don't have MasterPaint it shouldn't be too hard to write a BASIC program to flip all the pixels in a picture file from green to black and vice versa – just read each byte in the file, invert it with the NOT command and write it back. Maybe some clever reader would care to come up with a listing?*

More than a typewriter

I am an American stationed with the United States Air Force in your fine nation as a guest of your government.

I purchased a PCW 8256 (American specifications) through our base exchange (BX). I love the little beastie and wouldn't trade her for all of the tea in China or England.

I saw a letter in Issue 14 of 8000 Plus from Mr Ray Thomas of California and would like to provide some more information that may help some American owners of the PCW who are getting a bit frustrated with the lack of stateside support of the machine.

Mr Thomas is not alone in his difficulty with finding information on the PCW and supporting software. When I bought the beastie from the BX, I was told that, "It can only be used as a word processor". I am not stupid. Any machine that comes with BASIC and Logo and a CP/M system is a bunch more than a word processor. Could I convince anyone in the BX? Not a chance!

No problem, I had the opportunity to go to Oklahoma city, Oklahoma in the USA in June of this year. There I found the little beastie for sale at Sears. Guess what? It is only a word processor. I called 1-800-PCW-HELP (which is a toll free number in the USA) and they were a trifle more helpful. They sent me a very small catalogue of products. Extremely restricted in quantity.

I returned to the UK and found that the PCW was selling like hotcakes (old colonial expression) in the BX. In my organisation alone, I know of at least 10 owners counting myself. I went to the BX and gave them copies of 8000 Plus, the little Amstrad catalogue from the states and some of my rapidly developing knowledge of the computer. Guess what? It is still only a word processor.

Three weeks ago, I went to Dallas, Texas. I went to Sears and was advised that the PCW was only a word processor. I demonstrated to the sales person that it could run BASIC programs. He was impressed but said that he could not tell people that it was also a computer. Then, to make it more interesting, I noticed a little catalogue next to the display. It was from our friends at 1-800-PCW-HELP. But it listed only materials for word processing. They have actually gone to the trouble to print a catalogue that convinces people that the PCW is only a word processor. I am curious to know why the conspiracy?
Harry "Doug" Eyre
RAF Feltwell, Norfolk

● *The American marketing of the PCWs has been very interesting – as you say, it is pushed purely as a word processor. The microcomputer market over there is dominated by 5¼" discs and IBM PCs, and there was very little interest in CP/M as an operating system so the computer side of the PCW never really took off. We hope to carry a report in the future on how the PCW has sold in America – according to Amstrad's Annual Report, North America accounted for only 2.6% of turnover in 1986-7, compared to 43.5% in Britain.*

To ink...

I read with interest the letter from Edward Bedingfeld concerning the quality of PCW printer ribbons, both new and re-inked. While it is true that a certain amount of initial 'splash' sometimes occurs with a re-inked ribbon, this usually disappears fast and can often be alleviated by reducing the print-head pressure. The fact that the vast majority of our customers continue to use our service time and time again indicates a high degree of satisfaction.

Nevertheless, a ribbon re-inked by us which does not perform satisfactorily should always be returned to us for corrective treatment.
Nick Godwin
Aladdink Inking, Berwickshire

...or not to ink

After reading Edward Bedingfeld's letter in the December issue of 8000 Plus, I felt I had to write and agree with his comments about ribbon re-inking. We recently had 6 ribbons re-inked with one of the advertisers in your magazine, and like Edward's ribbons, they were returned with far too much ink on them. The paper was smudged and the print blurred, and worse than this, when new ribbons were purchased, the print quality was found to be greatly deteriorated. Now to get legible printouts, two sheets of paper need to be fed into the printer at one time.
D.F. Whitley
Kenmore Cleaning, Cleckheaton

● *There you have it – the two sides of the debate. Basically, it seems that if you demand guaranteed perfect quality print every time then you ought to buy new ribbons, but if you're prepared to live with some reduction in quality to save a few pounds per ribbon then go for reinking.*

Happy customer

After reading the 8000 Plus write up on Silicon City's memory upgrade, I bought the Memory Upgrade and fitted it. The Silicon City instructions are simply superb: so clear, so easy to follow and so complete.

Sometime later, I occasionally got odd wrigglies on the screen, and suspecting LocoScript 2 contacted Locomotive. Loco 2 Support lent me a Test Disc and advised me I had what seemed to be a faulty memory chip. They advised which I should start with in trial-and-error replacement, and Silicon City sent me a pair of replacement chips. It took about 30 minutes to do the job and my 8256 is now OK.

I was very impressed with and most grateful for the prompt support I got from Mr Langford of Silicon City and Mike Baker of Loco 2 support.
Ike Dawson
Gainford, Co. Durham

Curses! Discovered!

Why hasn't the forthcoming International Fruit and Nut convention received greater publicity? With dark and distinguished chocolate academics coming to Olympia in November from as far afield as Peru and China, one would have expected more than just a dozen lines, even if it was featured prominently on your front cover (issue 14) as your first published example of PCW9512 daisywheel type.

Well, I hope your teeth fall out! Now, what's this about getting a prize of a giant-sized bar of fruit and nut for being observant?
Harry Pattinson
Rugeley, Staffs

● *You'll go blind reading type that small on our covers, but well spotted. We do keep buying bars of Fruit and Nut to send you as*

a prize, but somehow they get eaten before we can post them off. Maybe it's those Japs...

Feeding time

With the excellent mailmerge facility now offered by LocoScript can you tell me if there are any cut sheet feeders available for the Amstrad printer?

Continuous business letterheads for a minimum order of 500 are priced at £125 to £140, or having your own notepaper glued onto a backing tractor fed paper at £80 per 500 sheets are the only routes apart from purchasing an Epson or Star printer. The LQ800 is £435 plus the interface at £49, the lead at £11 and the cut-sheet feeder at £140 – making a total of £635, which alas appears to be an unreasonable figure just to run the LocoMail program effectively. Do you know of any cheaper solutions?

Neil Carter
Towersey, Oxon

● *Sorry, I don't know of any single sheet feeders for the Amstrad PCW printers... but if any readers know better? The 9512 daisywheel has a very powerful paper grip and can feed even thick sheets through quite reliably, but I doubt the 8000 series printer has a good enough friction roller to make a sheet feeder practical – you'd have to stand and watch it all the time to catch jams.*

Diminishing discs

I was heartened to read the letter from D.F. Hinson in the November issue of 8000. I was able to feel superior as I had worked out the solution to his problem myself, although I have a great many difficulties myself in understanding LocoScript. The initial start up disc and manual seem to be obsessed with printing letters in 10 pitch on a blank piece of A4 paper, whereas most business users and others will be using letter-headed paper of varying lengths and shapes.

However, I have my own insoluble problem which no doubt has a simple solution. I am struggling with the setting of the margins when using 12 and 15 pitch. Could someone explain the workings of 'ScalePitch' as it seems to make no difference to the position at which the left margin ends and printing begins. If the left margin is set at 10 the printer head always moves in 1" regardless of the character or scale pitch.

Another tiny gripe is that looking at the advertising literature gives the impression that the disc holds masses of data. And yet, 1 Megabyte suddenly become 720k when formatted and then becomes 706k usable on disc. If you save your files on a start of day disc there is even less space available. Finally, all the data is stored in units of 2k, which means that even the shortest letter is 2k and a document which may contain 2 or 3 words more than a similar one may jump from 2k to 4k.

John Worthington
Sale, Cheshire

● *The scale pitch governs the physical width of your text. If you have an 80 column page and a scale pitch of 12 then the lines will be 80 characters of 12-pitch text wide, ie. 6.7 inches (80÷12) in that layout. If you change to 17 pitch text you will still get a 6.7 inch line, with 114 characters to the line (6.7 x 17). It may look on the screen as though the right hand margin has been broken, but it will be OK when printed.*

As for the discs, I quite agree that it is misleading to describe B discs as '1 Megabyte' since there is no practical way of getting that amount of storage out of it. Every disc is split into blocks, and when a file is created the disc 'directory' records which blocks each file uses. If the blocks were very small, there would be so many blocks per file the directory would take up half the disc space.

On average, every file will waste half of its final block, ie. 1k on a B disc. The PCW's designers decided that a 2k block size was the best compromise to minimise wastage without having too big a directory.

Hoist on its own

The following may appeal to your peculiar sense of humour: while using my 8512 for E-mail I have been doing a comparative test of Microlink and One-to-One. After three or four months it became obvious that One-to-One suited me better (checking the mailbox was cheaper, and the growing list of services available was more relevant to my needs).

I therefore sent an E-mail message to Microlink asking them to cancel my subscription.

About a week later a telex appeared to have gone astray, and while looking for it I thought to check if I could still get on-line to Microlink. I could – and there was a message waiting for me.

It turned out to be from Microlink. "We got your message," they said. "But before we can cancel your subscription, you must send us a letter".

Need I say more?

D A Revell
Hexham, Northumberland

● *Come the communications revolution, comrade, we'll all be up against the electronic wall.*

Reel complaints

We were very perplexed by your comments on the *Reel-Time Complete Introduction to LocoScript* in your recent article on training, and I should very much like to put the other view.

Like all training companies you reviewed Head-Line runs courses, but we believe that when the machine costs under £300 PCW users often find £250 or so for the introductory and advanced training courses rather steep.

In fairness to other training organisations, it's hard to run quality training courses any cheaper than that, so we designed an entirely new approach. The result, *The Complete Introduction*, is the same training course delivered by the same trainer but

Dangerous talk

Fire is a subject understandably talked about with the same reluctance as terminal illness, child molesters and crashed aircraft and a topic rarely, if ever, covered in the multitude of computer magazines.

Fortunately, fires only happen to other people and why should we be unduly concerned about it occurring within the computer environment. If you own or use floppy discs, then you most certainly should be, as the fire may be less of a problem than the damage you cause once it has occurred.

Water? No, most people realise that water and electricity do not get on particularly well together. So turn off the electrics, then use the water? No, wrong again, an awful lot of electrical equipment including TV's and monitors have condensers or capacitors within them, which will hold a high voltage for a considerable time after they are switched off. Any water coming into contact with these may conduct the electricity back to the user.

Foam? No, again, it's water based and whilst ideally suited for flammable liquid fires ain't much use here.

Dry Powder? Well, maybe, it is safe as regards the electrical problem but the aftermath of using one vaguely resembles entering the packing room of a Victorian flour room.

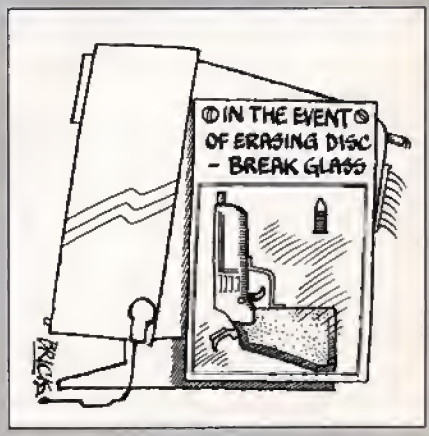
CO_2? Carbon Dioxide. Just the thing for dealing with small electrical fires. But did you use it near those precious floppy discs and if so did you find that the complete contents of the disc had been erased afterwards? Unfortunately, this is a problem that can and does occur with CO_2, it's to do with the low temperature that the 'gas' is emitted at (-79°C) and one which we hear little about, which is a pity as a computer can always be replaced but unless copies of discs are made and stored elsewhere irreplaceable information could be lost forever.

So what is the answer? It would appear to be a relative newcomer to the world of fire engineering, a group referred to as Halons, or halogenated, hydrocarbons to be more precise. These have such diverse names as Chloro-bromomethane and Bromochlorodifluoro-methane etc., thankfully shortened to CBM and BCF; they are ideal for small fires, non-conducting, will not damage electrical components and should not erase the data on floppy discs. Unfortunately, they do have a slight toxic element about them and so the user should try not to breathe the fumes in.

The choice is yours between getting burnt, electrocuted, dusted or poisoned. Obviously, the ideal solution is to prevent, with a capital P, the fire happening in the first place. However, fire hath no creed or race, morals or boundaries and a little thought now may at least save that precious data if nothing else.

D.C. Tatum
Southam, Warwicks

● *Interesting stuff. Like installing burglar alarms and backing up data discs, fire precautions are things that most people think about after a blaze.*



pre-recorded onto audio cassette and disc.

The difference is that you follow the course on your own machine, in your own home or office – and in your own time. OK, you lose the advantage of being able to stop the trainer and ask detailed questions, but that is more than offset by the ability to replay the whole course until you feel you've mastered the subject.

What else? Well, our trainer never forgets bits, can't rush on ahead leaving you confused, and always runs the course at a time to suit you. Incidentally, Dixons have just selected our *Complete Introduction to the Amstrad PC* to train al their store staff in the workings of that machine for precisely these sorts of reasons.

If you must compare us, please don't compare us with the manual and judge us expensive! A *Complete Introduction* is the equivalent of a 2-day training course for just £34.44 – and if that's not "the biggest bargain in the world" I think it comes pretty close!

Jim Gatten
Marketing Director, Head-Line Communications

● *Thanks for putting your point of view – I shan't comment any further except to say that the methods that any individual person happens to like as an educational medium may not suit everybody else.*

SCA Clock/Interface

Perhaps you would sound a note of warning to other owners of the SCA interface (the one with the built-in real-time clock).

I was assured by SCA that they would be able to patch LocoScript 2's '.EMS' program to enable it to address a printer via its parallel port and, accordingly, sent them a copy of a recently acquired Version 2.12 update together with a cheque to cover the £3.00 copying charge. Some three weeks and at least two telephone calls later, I have been told that, so far, they have been unable to patch Versions 2.12 and earlier and have no plans to continue trying to do so.

Other SCA Interface owners beware!

R Villiers Lister
Basingstoke, Hants

● *We've rung SCA on this point and it seems that they have now resolved the matter. Patching software to work with their hardware was always a stopgap solution, and each new release of LocoScript would need everyone to send their discs back. They have now produced a new interface unit which uses all the standard PCW addresses and so is exactly compatible with Amsrtad's own CPS8256 – it will work with LocoScript (they say). Existing SCA owners can exchange their current units for new ones for £12.50 inclusive of VAT and p&p, or the price for the new units is £57.50.*

Recipe for success

Having difficulty in keeping open the pages of the PCW 9512 manual (November issue?) No problem! A recipe-book holder, for around a fiver in John Lewis (there are more expensive, fancier versions elsewhere), will do the trick. It is an elegantly simple device, a sheet of hard, clear plastic, bent around so that one edge folds back, acting as a spring to hold the open book in place.

Printing by the hour (News pages, November issue). The pages per hour figure for the PCW's 20-cps printer is around 20 for a 60 line page in double spacing. At any rate that's what it has done for me recently, through 5 copies by 351 pages of a thesis. The quickest rate was 17hrs for a single copy.

While I am writing, thank you for 8000 Plus. Mind you, it's an insidious form of brainwashing. We enjoy the laughs so much that we almost forget we're learning too – absorbing all those new ideas and that sound advice. Long may it last!

Geraldine Murray
London

A last word on

May I add my two-bits' worth to the recent correspondence about the CBASIC compiler? I recently purchased this product, at a knock-down price from one of your advertisers, as a matter of fact. No problem with deciphering the manual or creating source code: my objections concern the quality of performance of compiled programs.

A simple prime-sieve in compiled CBASIC runs something like five times more slowly than the Mallard BASIC interpreted version: performance of other straightforward procedures also suffers on compilation.

I'm by no means angry at this – as noted the compiler was a snip, and Mallard BASIC's performance is very impressive for an interpreter, besides being compatible with MBASIC code. I am simply amazed that Digital Research, the people who wrote CP/M in the first place, seem to be incapable of writing a decent compiler to run under their own operating system.

Nicholas Graham
Cambridge

● *I'm surprised at the disparity in speed you found, but then Mallard is a fairly efficient system. Anyway, let's declare the CBASIC correspondence closed at that.*

Treacherous thoughts

To date, there has been one blot upon the otherwise unsullied landscape of my existence – the absence of an excuse to buy an IBM PC compatible. I can't justify it 'cos there isn't a word processor for it – the only real wp only runs on the PCW range.

Recently, however, I sent off for LocoScript 2 and, even more recently, I returned it for upgrade, whereupon it came back equipped with a Basic program called LocoChar for the construction of user-defined characters. I immediately set to work to remedy what I believe to be the single greatest flaw in the LocoScript character set, namely the absence of box-drawing characters.

My efforts were only partially successful and in order to improve them I took a look inside LocoChar to see if I could persuade it to let me put dots on the bottom line of the character grid (in its standard form it resolutely prohibits this dastardly practice). I haven't yet finished that but, in the process, I found that the program alters its screen handling depending on which machine it finds itself within. No, I don't mean the 8xxx or the 9xxx range – its behaviour is decided by reference to two variables called 'JOYCE' and, wait for it, 'IBM'. Now isn't that interesting? I just thought you'd like to know.

Perhaps I'll be getting my PC compatible after all.

Mike Radmore
Hemel Hempstead, Herts

● *It's no secret that Locomotive have said in the past that they are 'thinking about' doing a LocoScript for IBM PCs, but beyond that they are saying nothing. But don't be a treacherous turncoat – why use a rotten IBM PC with a pokey 80 by 25 screen when your PCW has got 90 columns and 32 rows – that's over 40% more text displayed on the screen for word processing. You know it makes sense.*

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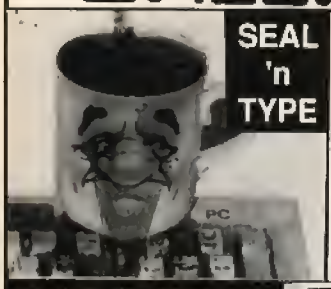

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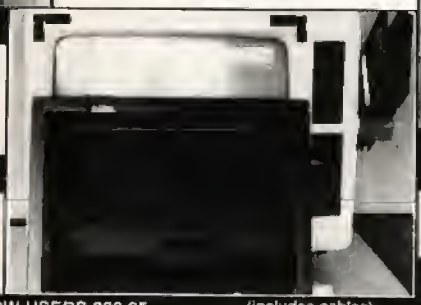

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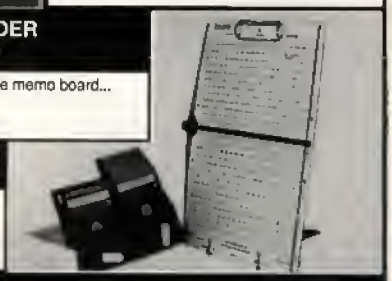

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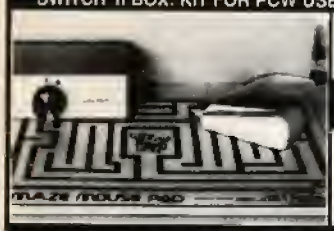

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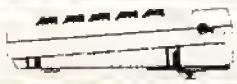

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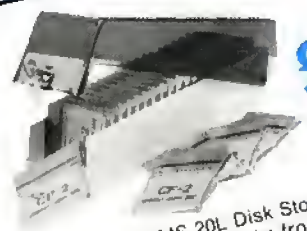

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